S. Hrg. 98-1036

U.S. PARTICIPATION IN THE INTERNATIONAL ENERGY PROGRAM

HEARING

BEFORE THE

COMMITTEE ON
ENERGY AND NATURAL RESOURCES
UNITED STATES SENATE

NINETY-EIGHTH CONGRESS

SECOND SESSION

ON THE

U.S. PARTICIPATION IN THE INTERNATIONAL ENERGY PROGRAM

MARCH 30, 1984

Printed for the use of the
Committee on Energy and Natural Resources

U.S. GOVERNMENT PRINTING OFFICE
39-136 O WASHINGTON : 1984

S311-64

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CONTENTS

STATEMENTS

	Page
Bergman, Dr. Elihu, executive director, Americans for Energy Independence	61
Ebinger, Dr. Charles K., director, Energy and Strategic Resources Program, Center for Strategic and International Studies, Georgetown University; accompanied by Jonathan B. Stein, research associate	47
McClure, Hon. James A., a U.S. Senator from the State of Idaho	1
Mendelowitz, Allan I., Associate Director, National Security and International Affairs Division, General Accounting Office; accompanied by Phil Thomas and Wayne Ferris	7
Metzenbaum, Hon. Howard M., a U.S. Senator from the State of Ohio	2
Singer, Dr. S. Fred, Energy Policy Studies Center, University of Virginia	36
Van Arsdall, R. Thomas, vice president, Agricultural Inputs and Services, National Council of Farmer Cooperatives	69

U.S. PARTICIPATION IN THE INTERNATIONAL ENERGY PROGRAM

FRIDAY, MARCH 30, 1984

U.S. SENATE,
COMMITTEE ON ENERGY AND NATURAL RESOURCES,
Washington, DC.

The committee met, pursuant to notice, at 10 a.m., in room SD-366, Dirksen Office Building, Hon. James A. McClure, chairman, presiding.

Present: Senators McClure, Warner, Hecht, Evans, and Metzenbaum.

Also present: Charles A Trabandt, chief counsel; E. David Doane, deputy chief counsel for energy; Elizabeth Moler, counsel for the miniority; Benjamin S. Cooper, professional staff member for the minority; and James T. Bruce, counsel for the minority.

OPENING STATEMENT OF HON. JAMES A. McCLURE, A U.S. SENATOR FROM THE STATE OF IDAHO

The CHAIRMAN. This is an oversight hearing on the U.S. participation in the International Energy Program.

The hearings will include testimony on the current activities of the International Energy Agency, the benefits to the United States of continued participation in the International Energy Program, and any detrimental aspects of such participation.

In addition, the testimony will address the question of whether the IEA's emergency oil sharing system would function effectively in the event of a serious disruption of international oil supplies.

Other important issues will also be addressed, such as the need for coordination among IEA countries in drawing down their petroleum reserves in response to a major oil supply disruption.

Another question is how the United States can best use its own strategic petroleum reserve during an international oil supply shortage. This issue recently has been the subject of an extensive analysis by the administration.

The hearing this morning is the first session of a 2-day hearing. The second session, which will be scheduled for a later date, will include testimony from administration witnesses. Their testimony will address the issues I have just mentioned, and it will also include a report on the IEA meetings that were held this week in Paris.

Over the past several years, the Congress has paid very close attention to the International Energy Agency and U.S. participation in the IEA's data gathering and planning activities.

The intensity of this congressional interest can be measured by the number of times the Congress has extended the expiration date of section 252 of EPCA, which is the basic statutory authorization for U.S. oil company participation in the International Energy Program.

Section 252 was extended three times during 1979; twice in 1981, and twice in 1982. It expired on December 31 of last year; however, it was reactivated on March 20, 1984, when the President signed a bill extending the date to June 30, 1985.

This history of repeated extensions of section 252 illustrates the fact that the hearing today is part of an ongoing congressional reassessment of whether our participation in the International Energy Program is in our national interest.

Our first panel of witnesses this morning will be representatives from the General Accounting Office.

Mr. Mendelowitz, and Mr. Thomas and Mr. Ferris, if you will take your places at the table. While you're doing that, I'll ask Senator Metzenbaum if he has a statement he would like to make at this time.

Senator **Metzenbaum**. I do, Mr. Chairman.

STATEMENT OF HON. HOWARD M. METZENBAUM, A U.S. SENATOR FROM THE STATE OF OHIO

Senator **Metzenbaum**. First, I'd like to congratulate you on following through with the discussions we've had in the past concerning the full issue of whether or not there should or should not be U.S. participation in the IEA.

As you well know, and it's no secret, that I have raised the question a number of times in connection with the extension of the anti-trust exemption under section 252, but the basic issue has always related to whether or not our Nation has any useful purposes to be served and whether it's in the best interest of this country to be a part of the IEA. That is the basic issue.

We know that Henry Kissinger, pretty much single-handedly, caused the IEA to be created. It was an attempt to create a consumer cartel against the OPEC nations. It has never been that, and it never will be that.

If you go beyond that and try to determine why is it that when there's a 7 percent shortfall that the United States winds up giving up its oil to other nations? And when there's a 12 percent shortfall, why does the United States give more of its oil to other nations?

This Senator has had difficulty in convincing himself that it is in the best interest of the United States to be a member of the IEA.

One time I did attend one meeting of the IEA. I don't recollect ever being more embarrassed in hearing my own Nation excoriated by other nations of this world who are supposed to be our friends and our allies, and for whom we would be giving up this oil, while they sat there and lambasted my country. And I said, well, why should we sit here and take this kind of abuse?

Nobody will be hurt as much as the United States if there is a shortfall, because it's our Nation that, fortunately, is oil sufficient—not quite oil sufficient, but has, certainly, far greater supplies than most other nations in the world.

Now, according to GAO, a major disruption in the Strait of Hormuz would cause the United States to lose 1.1 million barrels of oil per day. That's about the same amount of oil that was lost in the United States during the 1979 embargo.

But under our IEA obligations, the United States would be required to absorb an additional shortfall of 1.3 million barrels of oil per day so that more oil can go to other IEA countries during a crisis.

Instead of losing 1 million barrels, we would be losing as much as 2.4 million barrels of oil a day.

While Americans will be waiting in gas lines, farmers will be looking for fuel for their next planting. There will be a general concern, if not out-right panic. And the official U.S. policy would be to ship oil to Japan or other allies.

I, for one, doubt very much that the American public would buy that. I doubt it, and I doubt that this Nation would follow through on that kind of a commitment. My opinion is, the American people are not one one-hundredth of 1 percent—not one-thousandth of 1 percent are aware of the obligations that we have undertaken in our participation in the IEA.

I don't believe we should be involved in the IEA. But beyond the question of whether we should or should not be involved, there are many who actually question whether the IEA structure will work at all.

The IEA allocation plan depends on oil companies giving up their stocks during a crisis to an allocation formula. Obviously, the oil companies will not participate unless they can recover their stocks under a fair-sharing agreement which ensures that all companies will share the burden equally.

And to the best of my knowledge, there's nothing in the IEA that provides for that development to occur. The nations, yes; but the oil companies—whom this Senator has oftentimes described as actually being more powerful than many of the nations, including our own—I doubt very much that they're going to buy that concept, and I doubt that they're going to participate unless they can get the top dollar that is available in the free market.

But after 5 years of negotiating on this issue at the IEA, there is no fair-sharing agreement in place; and, notwithstanding the exemptions we provided for the oil companies to speak with each other on this issue.

Does that, therefore, mean that the IEA's allocation plan itself could not and will not be implemented?

Others have pointed out that the International IEA allocation plan is jeopardized by our administration's reliance on the so-called free-market approach to an oil shortage.

An essential part of the IEA programs we know is a concerted effort by all countries to reduce demand, especially during a crisis. But the administration has refused to incorporate any price and allocation scheme or other measures to reduce demand.

So what we're saying is that this document says you have to reduce demands 7 percent if there's a shortfall, and 12 percent under certain circumstances. The fact is, we have no procedure to do that in this Nation, except to let the free-market prevail. And under the recent AST-4 mock drill, oil prices went up to $98 per barrel, and the administration indicated it stlll would not intervene.

Now, if the United States is willing to pay the top price for oil in the middle of a crisis, doesn't it undermine the effort to allocate international oil through the IEA system of directed sales? Isn't it entirely likely that no matter what is said or done with the IEA, that oil will flow to the highest bidder?

And finally, what will happen to the consumers of this Nation during an international oil crisis? We have taken these steps to protect the public from a major shortage, especially to the development of our 370 million barrel SPRO, but nothing has been done to protect the American consumer from massive price hikes during a crisis, or even a perceived crisis.

There may be enough oil to meet a short-term crisis, but at what price, and who will be able to afford the oil?

This question is relevant to our review of the U.S. involvement in the IEA, because we're asking the consumer to take less oil in the middle of an international shortage; at the same time, we're telling the consumer that nothing will be done to moderate prices.

I think that adds up, frankly speaking, to a raw deal for the American consumer. And under that scenario, in my opinion, the American Government is not doing its job of protecting our citizens.

I believe that the burden of proof is on those who advocate our remaining in the IEA to show us (a) how our Nation's interests are best served; and, (b) how the plan will actually work. And I doubt very much that they can maintain that burden of proof.

I thank you, Mr. Chairman.

[The prepared statement of Senator Metzenbaum follows:]

U. S. Senator Howard M.
METZENBAUM
of Ohio

Committees
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MARCH 30, 1984

STATEMENT FOR SENATE ENERGY COMMITTEE HEARING ON U.S. PARTICIPATION IN THE INTERNATIONAL ENERGY AGENCY

I have raised questions about our involvement in the International Energy Agency because I do not believe that it is in the best interests of the United States to be a member.

According to the GAO, a major disruption in the Strait of Hormuz would cause the U.S. to lose 1.1 million barrels of oil per day. That is about the same amount lost to the U.S. during the 1973 embargo.

But under our IEA obligations, the U.S. would be required to absorb an additional shortfall of 1.3 million barrels of oil per day, so that more oil can go to other IEA countries during a crisis. Instead of losing one million barrels, we would be losing as much as 2.4 million barrels of oil per day.

Americans will be waiting in gas lines. Farmers will be looking for fuel for their next planting. There will be a general concern, if not outright panic. And the official U.S. policy would be to ship our oil to Japan and other allies. Will the American public let that happen? I doubt it.

I question whether we should be involved in the IEA. But there are many who question whether the IEA structure will work at all.

The IEA international allocation plan depends on oil companies giving up their stocks during a crisis according to an allocation formula. Obviously, the oil companies will not participate unless they can recover their stocks under a 'fair sharing' agreement which insures that all companies will share the burden equally.

But after five years of negotiations there is no such 'fair sharing' agreement in place. Does that mean that the IEA allocation itself could not be implemented?

Others have pointed out that the international IEA allocation plan is jeopardized by the Reagan Administration's reliance on the so-called 'free market' approach to an oil shortage. An essential part of the IEA program is a concerted effort by all countries to reduce demand, especially during a crisis. But the Administration has refused to incorporate any price and allocation scheme or other measures to reduce demand. The Administration has stated it will let prices go to the world market level, even in the middle of a true oil shortage. During the recent AST-4 mock drill, oil prices went to $98 per barrel, and the Administration said it still would not intervene.

If the U.S. is willing to pay the top price for oil in the middle of a crisis, doesn't that undermine the effort to allocate international oil through the IEA system of directed sales? Isn't it likely that oil will flow to the highest bidder, not through the IEA system?

Finally, what will happen to consumers during an international oil crisis? We have taken steps to protect the public from a major shortage, especially through the development of our 370 million barrel strategic petroleum reserve. But nothing has been done to protect the American consumer from massive price hikes during a crisis--or even a perceived crisis. There may be enough oil to meet a short-term crisis, but at what price? Who will be able to afford the oil?

This question is relevant to our review of the U.S. involvement in the IEA, because we are asking the consumer to take less oil in the middle of an international shortage. At the same time we are telling the consumer that nothing will be done to moderate prices. I think that adds up to a raw deal for the American consumer. And under that scenario, in my opinion, the American government is not doing its job of protecting its own citizen.

The **Chairman**. It isn't my purpose to debate with the Senator from Ohio at this time. There will be the opportunity, I suspect. Although I share many of the points that he has already suggested, I do want to correct just one statement.

Senator **Metzenbaum**. I just heard you say it's not your purpose to debate.

The **Chairman**. It is not. However, I want to emphasize one point relating to the statement that the United States said, in effect, that we would allow the price of oil to rise to $98 a barrel and would do nothing. I think that came out of the AST-4 exercise which was a hypothetical exercise designed to indicate what would happen if we didn't do certain things, or if we did do certain things. And that was a price response under that hypothetical circumstance and not a statement of policy.

Senator **Metzenbaum**. Oh, I understand that.

The **Chairman**. Senator Evans?

Senator **Evans**. I'm anxious to listen to the witnesses.

The **Chairman**. Senator Hecht?

Senator **Hecht**. Not at this time.

The **Chairman**. Thank you very much.

Dr. Mendelowitz, the show is yours at this point. I think Senator Metzenbaum has indicated your challenge to prove that we ought to do something. Senator Evans has indicated he hasn't made up his mind, and he wants to hear.

Now, I would invite you to summarize, if you desire to do so. Your entire prepared statement will, of course, be placed in the record in full.

STATEMENT OF ALLAN I. MENDELOWITZ, ASSOCIATE DIRECTOR, NATIONAL SECURITY AND INTERNATIONAL AFFAIRS DIVISION, GENERAL ACCOUNTING OFFICE; ACCOMPANIED BY PHIL THOMAS AND WAYNE FERRIS

Mr. **Mendelowitz**. Thank you, Mr. Chairman. I will read a somewhat abbreviated statement and submit the full statement for the record.

The **Chairman**. All right, sir.

Mr. **Mendelowitz**. I'm accompanied today by Mr. Phil Thomas, who is sitting on my left, and Mr. Wayne Ferris, who is sitting on my right.

We are pleased to be here to discuss with you our observations on U.S. participation in the International Energy Agency.

In response to the chairman's request, I will outline the current activities of the IEA, the benefits, as well as the risks and uncertainties of U.S. participation, and the importance of antitrust protection for U.S. oil companies that participate in IEA activities.

I will also discuss the recent executive branch reassessment of U.S. international energy preparedness following the 1983 IEA Emergency Sharing Test, known as AST-4.

The IEA, established in 1974, is the principal multilateral energy forum for 21 major oil consuming countries of the industrialized world. It maintains a Secretariat in Paris, consisting of 124 people, and has an operating budget for the fiscal year 1984 of $9.2 million.

IEA also has a number of industry advisory groups that work with it.

The United States was the moving force in establishing the IEA, and currently funds 25 percent of its budget. As the world's largest consumer of petroleum and the primary target of the 1973-74 Arab oil embargo, the United States believed it could derive substantial benefits from an organization like the IEA. U.S. participation is pursuant to an executive agreement.

A primary concern of oil-consuming countries who joined together to form the IEA was to reduce their vulnerability to politically or economically inspired oil supply interruptions.

IEA, with the voluntary assistance of 46 international oil companies, would accomplish this through an emergency oil-sharing system that would ensure that serious oil shortfalls, that is, those in excess of 7 percent of supplies, would be shared proportionately. No single country or group of countries would be subjected to the disruption of a narrowly targeted oil embargo, because IEA members would share available oil supplies and dissipate the impact of the embargo. When oil is to be shared, individual country allocation rights and obligations are calculated based on past consumption patterns and how the disruption affects individual countries.

When the oil-sharing system is triggered, each member country is initially expected to employ measures to restrain demand and/or rely on its own emergency reserves to help offset its shortfall. The IEA Program calls for member countries to maintain a reserve equal to 90 days of the previous year's net oil imports.

The oil supply situation has changed since the IEA was established. There is now a world glut of oil, making an embargo less likely. The U.S. level of imports has decreased, and in 1983 Arab oil exporting countries provided less than 15 percent of U.S. total net imports. No Middle East country was among the top five U.S. suppliers. And, the United States has spent a great deal of public funds to build up the strategic petroleum reserve, whose present level is over 380 million barrels.

Despite these changes, other IEA members remain significantly dependent on imported oil, particularly from the Middle East. While there has been an increase in publicly held reserves in this country in the Strategic Petroleum Reserve, industry oil stocks have declined substantially in recent years, and the possibility of an oil supply interruption remains.

However, the probable cause of the disruption has changed. It is not an Arab oil embargo that is considered most likely, but rather the disruption of Persian Gulf oil caused by civil unrest or war, such as the current Iran-Iraq conflict.

IEA monitors these changing world situations in the oil market, and supports efforts to reduce industrial countries' vulnerability to oil supply interruptions. To help achieve these goals, the IEA reviews the member countries' energy policies and programs, regularly makes current oil market assessments, serves as an energy policy coordinating forum, facilitates energy research, and participates in long-term cooperative efforts to reduce oil import dependence.

I'd like to turn now to the benefits of IEA as we see them.

In response to the Arab oil embargo of 1973–74, consuming countries scrambled frantically in an attempt to gain assured access to oil supplies, which resulted in the tripling of oil prices, leading to economic disruption in the form of inflation, decreased economic growth, and increased unemployment.

The scramble for oil also challenged, and to some extent, strained the overall political, security, and economic ties that bound together many of the industrialized countries. The IEA was established to enhance the ability of the developed world to respond to such an energy emergency.

The nature of the oil market is such that a temporary shortfall in oil supplies can lead to the price of oil quickly overshooting the long-run equilibrium price, exacerbating the impact of any shortage. U.S. officials have concluded that the existence of the IEA system can dampen the rise of oil prices in an emergency, thus, providing an economic as well as a political benefit. They believe the IEA also helps the member countries improve their understanding of the changing oil market, providing insights into how to enhance energy policies and programs, both unilaterally and collectively.

U.S. officials also believe that the United States gains collective security through the IEA emergency sharing system, which is more desirable than a potentially destructive go-it-alone approach to solving oil shortages. As a result, it can yield economic, foreign policy and national security benefits to the United States.

And, lastly, if there were an embargo targeted at the United States or an interruption seriously affecting U.S. oil supplies, the United States could stand to receive oil under the IEA emergency sharing system.

The benefits, of course, depend upon the ability of the IEA system to function. I would like to turn now to some of the risks and uncertainties.

The Emergency Sharing System is, of course, the key element to the IEA and the aspect about which important questions are asked. Will it work in an emergency, and, will countries have the political will to actually divert some of their oil to help other countries?

The Emergency Sharing Systems's allocation process has been tested four times, but the role that price will play in the voluntary sharing of oil during an emergency has never been tested.

IEA members have differed over the pricing principle to be used for oil being shared in an emergency. Recent efforts have been made to address these differences. The IEA guidelines in essence now indicate that the price of shared oil can be anywhere between the long-term contract price and the spot price. Nevertheless, this compromise may not resolve the underlying price concerns to ensure effective operation of the system in an actual emergency.

There is also uncertainty over when the IEA sharing system should be used. U.S. officials have held that it should be activated only during a sudden, severe oil crisis, when each IEA member could readily accept its obligations under the International Energy Program, the charter of the IEA.

However, the Iranian oil supply interruption of 1978–79 demonstrated that relatively small imbalances in supply and demand can cause significant price increases and have serious economic consequences. It also showed that the IEA, which originally had been established to respond to large supply interruptions, was unprepared to respond effectvely to a shortfall of less than 7 percent.

At the onset of the Iraq-Iran war in 1980, however, the IEA did provide the forum for developing and implementing an ad hoc coordinated response by member countries. Although these efforts apparently were constructive in moderating the effects of the crisis, it should also be pointed out that the improved world availability of oil was a major factor in establishing market equilibrium.

A question remains whether, for a sub-crisis situation, that is a shortfall of less than 7 percent, member countries should seek to develop a more coordinated response, which might include stock drawdowns or demand restraint measures. In this regard, the U.S. Government is currently discussing the possibility of drawing down the SPR in a sub-crisis. However, the United States could be disadvantaged if it unilaterally drew down its stocks and other IEA countries did not take comparable action, or worse yet, built stocks.

The 1983 test of the Emergency Sharing System also revealed a number of additional problems. In particular, the test focused attention on some of the difficulties the United States might face in relying exclusively on market forces to fulfill its international obligations under the Emergency Sharing System.

It also raised some questions as to how seriously the United States viewed the sharing program. AST-4 showed, for example, that the United States relied on a sharp increase in the price of oil to restrain demand. However, the IEA Secretariat and other IEA countries questioned whether this was consistent with IEA commit-
nts and pointed out that such a policy could frustrate the work-
of the sharing system.

The Department of Energy assumed certain behavior for the U.S. oil market that was critical to meeting U.S. oil sharing responsibilities under the test. However, the ability of the market to adjust as quickly and smoothly as DOE assumed does not reflect the realities experienced in prior emergencies.

And, most major U.S. oil companies said that they would not volunteer oil supplies to the IEA Emergency Sharing System unless some form of fair-sharing program existed to ensure that the burden would be shared equitably with their domestic competitors. DOE assumed that its market-based approach would work without a fair-sharing program.

In the aftermath of AST–4, the executive branch began to restudy U.S. international energy emergency preparedness. In recent months there's been considerable activity, including: (1) The creation of interagency task forces; (2) an organizational change at the Department of Energy in which the offices of Energy Emergencies and International Affairs were merged; and, (3) an IEA evaluation of the U.S. emergency response programs. U.S. officials recently advised us that their reassessment was still ongoing.

While the United States will continue to rely principally on market forces in a severe emergency, what seems to have changed is that the role of the SPR is changing. U.S. officials have advised the other IEA members that the United States ordinarily intends to draw down the SPR in large amounts at an early stage of a major supply interruption.

The specific conditions which will trigger the use of the SPR have not been clearly defined. However, U.S. officials have indicated they will consider using the SPR in an international crisis as: (1) A partial substitute for demand restraint required under article 16 of the IEP, (2) a possible means to meet U.S. overseas supply obligations under the IEA, (3) a vehicle for reducing the need for a fair-sharing program, (4) a means of dampening price escalation in an emergency, and (5) a source from which sales may be diverted to priority domestic consumers.

Several questions follow from the currently stated policy: (1) Can the SPR realistically be expected to simultaneously perform all these functions in a crisis, particularly under the existing drawndown plan; (2) will the SPR be drawn down in coordination with the drawdown of stocks by other countries; and (3) will the expected use of the SPR be sufficient to bridge the apparent gaps in compatibility between relying principally on the free-market approach and contributing to an effective international emergency oil sharing program?

With respect to U.S. companies participating in the IEA, U.S. oil company participation in the IEA was requested by the U.S. Government shortly after the agency was established. There is general agreement between the United States and other member countries that oil company participation is essential to the effective operation of the IEA emergency sharing system. The U.S. oil companies that we've visited stated that their voluntary participation in IEA emergency activities is contingent on the existence of the antitrust defense for such activities.

When the antitrust defense lapsed on December 31, 1983, U.S. oil company representatives to the IEA Industry Advisory Board were advised by their lawyers not to meet. With the recent extension of the section 252 provision to June 30, 1985, oil companies are again able to participate in the IEA with the benefit of the antitrust defense,

Mr. Chairman, this concludes my statement, and we will be happy to try to answer any questions you may have.

[The prepared statement of Mr. Mendelowitz follows:]

UNITED STATES GENERAL ACCOUNTING OFFICE

WASHINGTON, D.C. 20548

FOR RELEASE ON DELIVERY
EXPECTED AT 10:00 A.M.
MARCH 30, 1984

STATEMENT OF

ALLAN I. MENDELOWITZ
ASSOCIATE DIRECTOR, NATIONAL SECURITY
AND INTERNATIONAL AFFAIRS DIVISION

BEFORE THE

SENATE COMMITTEE ON ENERGY AND
NATURAL RESOURCES

ON

U.S. PARTICIPATION IN THE INTERNATIONAL ENERGY AGENCY

Mr. Chairman and Members of the Committee:

We are pleased to be here today to discuss with you our observations on U.S. participation in the International Energy Agency (IEA). In response to the Chairman's request, I will outline the current activities of the IEA, the benefits as well as the risks and uncertainties of U.S. participation, and the importance of antitrust protection for U.S. oil companies that participate in IEA activities. I will also discuss the recent executive branch reassessment of U.S. international emergency preparedness following the 1983 IEA Emergency Sharing System Test (AST-4).

Our testimony is based on our ongoing and past work on the IEA, which encompasses a wide range of issues concerning U.S. involvement. A list of unclassified GAO reports on IEA-related issues is attached. Our ongoing work is in response to a request by Senator Howard Metzenbaum.

CURRENT IEA ACTIVITIES

The IEA, established in 1974, is the principal multilateral energy forum for 21 major oil consuming countries of the industrialized world.[1] It maintains a Secretariat in Paris consisting of 124 people and has an operating budget for fiscal year 1984 of $9.2 million. IEA also has a number of industry advisory groups.

The United States was the moving force in establishing the IEA and funds 25 percent of its budget. As the world's largest consumer of petroleum and the primary target of the 1973-74 Arab oil embargo, the United States believed it could derive substantial benefits from an organization like the IEA. U.S. participation is pursuant to an executive agreement.

A primary concern of the oil consuming countries who joined together to form the IEA was to reduce their vulnerability to politically or economically inspired oil supply interruptions. IEA, with the voluntary assistance of 46 international oil companies, would accomplish this through an emergency oil sharing system that would insure that serious oil shortfalls, that is, those in excess of 7 percent, would be shared proportionately. No single country or group of countries would be subjected to the disruption of a narrowly targeted oil embargo because all IEA members would share available oil supplies and dissipate the impact of the embargo. When oil is to be shared, individual country allocation rights and obligations are calculated based on past consumption patterns and how the disruption affects individual countries.

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[1] Australia, Austria, Belgium, Canada, Denmark, Greece, Ireland, Italy, Japan, Luxembourg, Netherlands, New Zealand, Norway, Portugal, Spain, Sweden, Switzerland, Turkey, United Kingdom, United States, and West Germany.

Before the oil sharing system is triggered, each member country is initially expected to employ measures to restrain demand and/or rely on its own emergency reserves to offset a shortfall. The IEA program calls for member countries to maintain a reserve equal to 90 days of the previous year's net oil imports.

The oil supply situation has changed since the IEA was established:

--There is now a world glut of oil, making an embargo less likely.

--The U.S. level of imports has decreased and in 1983 Arab oil exporting countries provided less than 15 percent of U.S. total net imports. No Middle East country was among the top five U.S. suppliers.

--The United States has spent a great deal of public funds to build up the Strategic Petroleum Reserve (SPR), whose present level is over 380 million barrels.

Despite these changes, other IEA members remain significantly dependent on imported oil, particularly from the Middle East, and the possibility of an oil supply interruption remains.

However, the probable cause of disruption has changed; it is not an Arab oil embargo that is considered most likely but rather the disruption of Persian Gulf oil caused by civil unrest or war, such as the current Iran-Iraq conflict.

IEA monitors the changing world oil market and supports efforts to reduce industrial countries' vulnerability to oil supply interruptions. To help achieve these goals, the IEA:

- --Reviews the member countries' energy policies and programs, based on annual submissions from each country. Each IEA country is periodically reviewed in depth and recommendations are made where policies can be improved.

- --Regularly makes current oil market assessments based on monthly country submissions compiled from company and government data and provides a forum for discussing oil market developments.

- --Serves as an energy policy coordinating forum through regular multilateral energy conferences.

- --Encourages and facilitates research on new technologies to develop alternative sources of energy and more efficient energy use through cooperative multinational projects.

- --Participates in long-term cooperative efforts to reduce oil import dependence through conservation and increased reliance on other fuels, such as coal, gas, and nuclear.

- --Strives to establish a dialogue between oil consuming and producing countries.

- --Performs special ad hoc energy security assessments, such as the one completed in 1983 on alternatives to European imports of Soviet natural gas.

BENEFITS OF U.S. PARTICIPATION

In response to the Arab Oil Embargo of 1973-74, consuming countries scrambled frantically in an attempt to gain assured access to oil supplies, which resulted in a tripling of oil prices, leading to economic disruption in the form of inflation, decreased economic growth, and increased unemployment. The scramble for oil also challenged, and to some extent strained, the overall political, security, and economic ties that bound together many of the industrialized countries. The IEA was established to enhance the ability of the developed world to respond to such an energy emergency.

The nature of oil markets is such that a temporary shortfall in oil supplies can lead to the price of oil quickly overshooting the long-run equilibrium price, exacerbating the impact of any shortage. U.S. officials have concluded that the existence of the IEA system can dampen the rise of oil prices in an emergency, thus providing an economic as well as a political benefit. They believe the IEA also helps the member countries improve their understanding of the changing oil market, providing insights into how to enhance energy policies and programs both unilaterally and collectively.

U.S. officials also believe that the United States gains collective security through the IEA Emergency Sharing System, which is more desirable than a potentially destructive "go-it-alone" approach to solving oil shortages. As such, it can yield economic, foreign policy, and national security benefits to the United States.

Lastly, if there were an embargo targeted at the United States or an interruption seriously affecting U.S. oil supplies, the United States could stand to receive oil under the IEA Emergency Sharing System.

RISKS AND UNCERTAINTIES

The Emergency Sharing System is the key element of the IEA and the aspect about which important questions are asked. Will it work in an emergency? Each participating country's willingness to subject its domestic oil production and supplies to international allocation during an emergency is crucial to the effectiveness of IEA. Will countries have the political will to actually divert some of their oil to help other countries?

The Emergency Sharing System's allocation process has been tested four times, but the role that price will play in the voluntary sharing of oil during an emergency has never been tested. A consensus among member countries on the principles of oil pricing during an emergency is critical to a voluntary functioning of the IEA allocation system. However, IEA members have differed over the pricing principle to be used for the oil being shared in an emergency. Recent efforts have been made to address these differences. The IEA guidelines now indicate that such a price can be anywhere between the long-term contract price and the spot market price. Nevertheless, this compromise may not resolve the underlying price concerns to insure effective operation of the system in an actual emergency.

There is also uncertainty over when the IEA Emergency Sharing System should be used. U.S. officials have held that it should be activated only during a sudden and severe oil crisis, when each IEA member country would readily accept its obligations under the International Energy Program (IEP), the charter of the IEA. They contended that the system is onerous and costly to operate and somewhat heavy-handed for dealing with temporary market disruptions or gradual supply reductions.

However, the Iranian oil supply interruption of 1978-1979 demonstrated that relatively small imbalances in supply and demand can cause significant price increases and have serious economic consequences. It also showed that the IEA, which had originally been established to respond to large supply interruptions, was unprepared to respond effectively to a shortfall of less than 7 percent.

At the onset of the Iran-Iraq war in 1980, however, the IEA did provide the forum for developing and implementing an ad hoc coordinated response by member countries. Although these efforts apparently were constructive in moderating the effects of the crisis, it should also be pointed out that the improved world availability of oil was the major factor in re-establishing market equilibrium.

A question remains whether, for a subcrisis situation, member countries should seek to develop a more coordinated response, which might include stock drawdowns or demand restraint measures. In this regard, the U.S. government is currently discussing the possibility of drawing down the SPR in a subcrisis. However, the United States could be disadvantaged if it unilaterally drew down its stocks, and other IEA countries did not take comparable action or, worse yet, built stocks.

The 1983 test of the Emergency Sharing System (AST-4) revealed a number of additional problems which should be addressed if the system is to make a significant contribution to reducing the costs and dislocations of an oil supply interruption.[2] In particular, the test focused attention on some of the difficulties the United States might face in relying exclusively on market forces to fulfill its international obligations under the Emergency Sharing System. It also raised some questions as to how seriously the United States viewed the sharing program. AST-4 showed, for example,that:

--The United States relied on a sharp increase in the price of oil to restrain demand. However, the IEA Secretariat, its expert's group, and other IEA countries questioned whether this was consistent with IEA commitments. They pointed out that if the price in the United States, which will likely have an oil allocation obligation under the IEA system, rose significantly above the level that countries with allocation rights were willing to pay, the whole system would be frustrated.

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[2] For further elaboration of this test, see Assessment of U.S. Participation in the International Energy Agency's Fourth Test of Its Emergency Sharing Allocation System, (GAO/NSIAD-84-4, Oct. 13, 1983).

--The Department of Energy (DOE) assumed certain behavior for the U.S. oil market that was critical to meeting the U.S. oil sharing responsibility under the test. However, the ability of the market to adjust as quickly and smoothly as DOE assumed does not reflect the realities experienced in prior emergencies.

--Most major U.S. companies said that they would not volunteer oil supplies to the IEA Emergency Sharing System unless some form of fair sharing program existed to assure that the burden would be shared equitably with their domestic competitors. DOE assumed that its market-based approach for coping with emergencies might preclude any need to employ a fair sharing program or that other options, i.e., drawdown of the SPR and a system of direct supply orders to various companies, might be relied on should that assumption prove false.

--The United States in the test relied heavily on companies, other than the major oil companies that have been working directly with IEA, to supply oil to meet U.S. obligations. The companies may be willing to share oil with other IEA member nations, but the test did not convincingly demonstrate that these companies can make a significant contribution in an actual emergency.

Another test of the IEA system is now tentatively scheduled for the fall of 1985.

RECENT EXECUTIVE BRANCH REASSESSMENT OF U.S. PREPAREDNESS

In the aftermath of AST-4, the executive branch began to restudy U.S. international emergency preparedness. In recent months there has been considerable activity, including (1) the creation of interagency task forces; (2) an organizational change at the Department of Energy in which the Offices of Energy Emergencies and International Affairs were merged; and (3) an IEA evaluation of the U.S. response programs. U.S. officials recently advised us that their reassessment was still on-going.

Nevertheless, some things about the latest U.S. policy are known. The United States will continue to rely principally on market forces in a severe energy emergency. However, the role of the SPR appears to be changing. A few months ago, the U.S. position was perceived to be that the SPR would be held in reserve to be used as a last resort. More recently, U.S. officials advised the other IEA members that the United States ordinarily intends to draw down the SPR in large amounts at an early stage of a major supply interruption.

The specific conditions which will trigger the use of the SPR have not been clearly defined. However, U.S. officials have indicated that they will consider using the SPR in an international crisis as (1) a partial substitute for demand restraint required under Article 16 of the IEP, (2) a possible means to meet U.S. overseas supply obligations under the IEA, (3) a vehicle reducing the need for a fair sharing program, (4) a means of dampening price escalation in an emergency, and (5) a source from which sales may be diverted to priority domestic customers.

Several questions follow from the currently stated policy: (1) Can the SPR realistically be expected to simultaneously perform all these functions in a crisis, particularly under the existing drawdown plan? (2) Will the SPR be drawn down in coordination with the drawdown of stocks by other countries? (3) Will the expected use of the SPR be sufficient to bridge the apparent gaps in compatibility between relying principally on the free market approach and contributing to an effective international emergency oil sharing program?

U.S. OIL COMPANY PARTICIPATION[3]

U.S. oil company participation in the IEA was requested by the U.S. government shortly after the agency was established. Although companies were initially reluctant to participate, they have participated regularly as long as they had antitrust protection. They now generally perceive their participation as beneficial to their own interests and to the interests of oil-consuming countries. The companies say the IEA also presents them with a more acceptable form of government intervention than the more direct forms, such as various nationalization schemes and/or emergency mobilization boards. Although the IEA and member governments are involved, the IEA system works within the basic distribution system used by the oil companies.

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[3] In our October 1983 testimony before this Committee we provided for the record detailed information on the extent of oil company participation in the IEA.

There is general agreement between the United States and other member nations that oil company participation is essential to the effective operation of the IEA Emergency Sharing System. The companies provide crucial data on the availability of oil and the mechanism for actually sharing and transporting oil. The U.S. oil companies that we have visited stated that their voluntary participation in IEA emergency activities is contingent on the existence of the antitrust defense for such activities.

The antitrust defense, which enables U.S. oil companies to meet as a group, advise the IEA Secretariat, provide disaggregated company data in an emergency and participate in an IEA allocation of supplies, was authorized by Section 252 of the Energy Policy and Conservation Act of 1975. When the antitrust defense lapsed on December 31, 1983, U.S. oil company representatives to the IEA Industry Advisory Board were advised by their lawyers not to meet. With the recent extension of the Section 252 provision to June 30, 1985, oil companies are again able to participate in the IEA with the benefit of the antitrust defense.

Mr. Chairman, this concludes my statement. We will try to answer any questions you may have.

ATTACHMENT

LIST OF UNCLASSIFIED GAO REPORTS DEALING WITH THE INTERNATIONAL ENERGY AGENCY

--Assessment of U.S. Participation In The International Energy Agency's Fourth Test of Its Emergency Sharing Allocation System (GAO/NSIAD-84-4) October 13, 1983.

--Oil Supply Disruptions: Their Price And Economic Effects (GAO/RCED-83-135) May 20, 1983.

--Operation of The International Energy Agency's Coal Industry Advisory Board (GAO/ID-83-44) April 21, 1983.

--Analysis of Department of Justice Memorandum Concerning President's Statutory Authorities In An Oil Crisis (GAO/OGC-83-6) March 4, 1983.

--Analysis of The Comprehensive Energy Emergency Response Procedures Report (GAO/RCED-83-106) February 17, 1983.

--Determination of Oil Price In The International Emergency Sharing System--An Unresolved Issue (GAO/ID-83-15) November 12, 1982.

--The Changing Structure of The International Oil Market (GAO/ID-82-11) August 11, 1982.

--Demand Restraint And Fair-Sharing Under The International Energy Program (B-206525) April 6, 1982.

--The United States Remains Unprepared For Oil Import Disruptions (EMD-81-177) September 29, 1981.

--Unresolved Issues Remain Concerning U.S. Participation In The International Energy Agency (ID-81-38), September 8, 1981.

--Analysis of the Energy And Economic Effects Of The Iranian Oil Shortfall (EMD-79-38), March 5, 1979.

--U.S. Energy Conservation Could Benefit From Experiences of Other Countries (ID-78-4), January 10, 1978.

--U.S. Oil Companies' Involvement In The International Energy Program (HRD-77-154), October 21, 1977.

--Issues Related To Foreign Sources of Oil For The United States (B-179411) January 23, 1974.

The **Chairman**. Thank you very much, Mr. Mendelowitz.

To share our time fairly, let's do the first round on a 10-minute time limit. That will allow us to get to the next panel and complete it by noon, perhaps.

On page 6 of your testimony, you raise the issue of whether participating IEA countries would have the political will to actually divert some of their oil during the disruption that triggers the IEA sharing system.

Do you know whether the IEA has investigated this issue in assessing the ability of the emergency sharing system to operate effectively during a major disruption?

Mr. **Mendelowitz**. Senator, that's a very difficult question, of course. The issue of political will—or the question of political will will always remain with respect to any multilateral obligations.

We believe that the IEA should be viewed within the overall fabric of the Western Alliance, the existence of NATO, the Common Market, and all the other institutions that we have. The issue of political will with respect to the IEA shouldn't be viewed exclusively as a stand-alone responsibility or obligation.

And, in that light we view that the political will question is on a par with our other international multilateral obligations to the Western Alliance.

We do not know of any special concerns that have been voiced in the IEA with regard to this question.

The **Chairman**. You also noted that the IEA countries have not agreed on how allocated oil should be priced during an emergency.

Is it a fair assumption that if the oil sharing system were triggered, some receiving countries would impose domestic price controls on oil and would not be willing to pay the going market price for allocated oil if that price exceeded the ceiling price?

Mr. **Mendelowitz**. I think that is a genuine problem.

The **Chairman**. Do you have any suggestions on how this problem can be resolved?

Mr. **Mendelowitz**. I think that this issue has to be looked at within the experience of AST-4. And despite all the problems—or I should say because of all the problems that AST-4 surfaced, we view AST-4 as a major success, because the experience in that test forced the administration to confront the issue as to how consistent our domestic emergency response was with our international obligations.

Based upon what the administration is saying with respect to the use of the strategic petroleum reserve as a measure that can be used to dampen price runups and overshooting of the equilibrium price in the market, we believe that this issue of price is being addressed, but it's being addressed in a more fundamental way than just the issue of what happens if our price is higher than someone else's.

In any crisis, price is going to go up because there's going to be a disequilibrium between supply and demand; demand will exceed supply. What we want to do is to try to close that gap. The greater our ability to close that gap, the less price is going to ratchet up.

And the extent to which we combine measures, such as using existing inventories of oil, and our allies using demand restraint measures, there will be much less upward pressure on price during such an emergency.

The CHAIRMAN. If I recall the facts correctly, in 1979, after the Shah of Iran had fallen from power and the war broke out in the Persian Gulf area, a war that still goes on, temporarily the free world lost about 10 percent of its oil supplies, which were temporarily diverted or removed from production and distribution. And that converted the situation from a marginal surplus of oil supply to a marginal shortage of oil supply, and the price of oil tripled. The spot market reacted very quickly to that shortage, that perceived shortage. Rather than drawing down on inventories, people started building inventories, and apparent consumption skyrocketed far above apparent production, and it had that tremendous leverage on price.

I assume that that would happen again; that if we get to the point where there is an apparent shortage, apparent consumption would immediately rise and have a very much larger effect upon price. Is that a fair assumption?

Mr. MENDELOWITZ. Senator, it's always hard to know what will happen until there is an actual emergency. But I think that a comparison of what happened in 1979 when the Shah fell with what happened in 1980 when the Iran-Iraq war started is instrumental.

Everything that you reported is historically accurate. In 1979, there was a marginal shortfall of oil supplies that led to, among other things, a buildup of inventories on the part of oil companies and consumers, and a tremendous increase in the price of oil.

The Iran-Iraq war did not provoke a similar response. And one of the reasons why was that the oil companies, by August of 1980, had accumulated historically high inventories of oil. There were tremendous amounts of oil available in stocks that could be drawn down to help bridge the gap between supply and demand.

The Iran-Iraq war started in the latter half of September 1980. The EAI Governing Board met on October 1, 1980, and agreed to take steps to encourage that no inventory buildups would take place and that, in fact, existing stocks would be drawn down so that we would have a reduction in the pressure on oil prices, and this is what happened.

So that I think it's hard to say what would happen in an emergency, but, for example, the availability of the SPR——

The CHAIRMAN. Are you suggesting that in that event the IEA mechanism worked to some degree, just the consultation and informal decisionmaking?

Mr. MENDELOWITZ. I think that the primary reason why we did not have panic in the market in September of 1980 was the tremendous overhang of world inventories. Given that the fundamentals were there, given that the oil was there, the informal consultations that took place under the umbrella of the International Energy Agency, we believe, were constructive and helpful. Had the oil not been there, I don't think much could have been done.

The CHAIRMAN. If the oil had been there and the consultation had not taken place, what would have happened?

Mr. MENDELOWITZ. Senator, it's hard to say. I just don't know.

The CHAIRMAN. Well, you speculated as to what would happen if the oil had not been there, but you refuse to speculate as to what would have happened if there had been no consultation.

Mr. MENDELOWITZ. That's because I believe the existence of the oil inventories was a necessary condition. The existence of the IEA consultations without the oil inventories would likely have been inadequate.

The CHAIRMAN. Well, I understand that. But would the reverse have been inadequate?

Mr. MENDELOWITZ. I just can't say, because it depends upon the extent to which the private market would have responded.

I think that having the IEA member countries get together, having them discuss this issue, having them pass the word along to the actors in the marketplace that they were sort of concerned about what was happening, and that if they responded in a certain way we would have a positive result, I think was helpful.

The CHAIRMAN. Now there was an embargo in 1973.

Mr. MENDELOWITZ. That is correct.

The CHAIRMAN. Was the embargo the result of an oil shortage or a political event?

Mr. MENDELOWITZ. Well, if I remember back correctly to the summer of 1973, gas stations in this country were closing on Sundays. They were closed on Sundays because there was a shortage in the pipeline of oil supplies.

The market in 1973 before the Arab oil embargo was quite tight, and that enabled the Organization of Arab Petroleum Exporting Countries to take a tight market and, with a very small cutback in production, and a declaration of the embargo for either political or economic reasons, to produce the result that we saw.

The CHAIRMAN. The reason I asked that question, many people believe that the embargo would not have been possible at all if it were not for the political events that occurred at that time.

Mr. MENDELOWITZ. I just can't speculate on that. But I do know that without the existence of a tight petroleum market to begin with, the embargo would not have been possible.

If you have a world market in which there are excess supplies, excess capacity in producer countries, a diffusion of energy producers around the world, an embargo becomes a fairly difficult thing to undertake.

The CHAIRMAN. It becomes more difficult, certainly.

Would it be fair to say that an embargo is possible only when those who are willing to impose the embargo have a sufficient supply to deprive the world of necessary supplies, necessary volumes?

Mr. MENDELOWITZ. I think that's correct.

The CHAIRMAN. What's the volume flowing from the Persian Gulf today compared to the surplus supply?

Mr. MENDELOWITZ. The oil coming from the Persian Gulf currently is something on the order of 8 to 10 million barrels a day. Most of it transits the Strait of Hormuz. Some of it goes through a pipeline from Iraq, through Turkey to the Mediterranean, and some of it goes through an East-West pipeline in Saudi Arabia to the Red Sea.

In a rough estimate if, for example, the Strait of Hormuz were to be totally closed, by using excess capacity in the Saudi-Arabian East-West pipeline, using full capacity in the Iraqi pipeline, using excess capacity elsewhere in the world, our guess is that a ballpark figure of how much oil would be taken out of the world market would be something on the order of 3 to 4 million barrels a day.

The CHAIRMAN. Is it possible to assume a political event that causes not just the physical disruption of supplies, but the political disruption of supplies from Iran, Iraq, Saudi-Arabia, the Gulf sheikdoms, all of them simultaneously? Or do you think that's beyond any reasonable hypothesis?

Mr. MENDELOWITZ. I would say currently that appears to be unlikely, given the level of hostility between the various States in the region.

The CHAIRMAN. I have a slightly different view on that, and I'll simply express it. I'll not argue with you.

If Iran were to win the war between Iran and Iraq, and the Shiite Fundamentalist revolution should extend to all of the Arab countries around the Gulf, it is not at all impossible that there would be a political event that caused the total cessation of supply.

That's not rational from our standpoint, but Khomeini is not rational, from our standpoint.

Mr. MENDELOWITZ. I think your scenario is certainly well within the realm of possibility, and that would be a major change in the political situation.

The CHAIRMAN. Senator Evans.

Senator EVANS. And I understand—and maybe this is for my own benefit than anyone else's who's been at this longer.

As I understand, we've got the 21 nations who are involved in the IEA, but in looking at the list of the nations you have on your statement, would it be accurate to say that the ones in light of a major shortfall of imported oil, that probably West Germany and Japan would be as seriously affected as all of the other nations put together?

In other words, to try to sort this out and to get down to a simpler scenario, we talk about this large complex and 21 nations involved, but the United Kingdom is pretty close to self-sufficent, Norway is close to self-sufficient, Canada is certain self-sufficient. What are we really talking about?

Mr. MENDELOWITZ. Within the IEA countries current consumption is on the order of 30-million barrels a day. The United States uses half of that. And within the IEA countries, of course, England is an exporter of oil, Canada is, I believe, a net exporter of oil, but the major dependent countries are, of course—Japan would be No. 1, and Germany and other members, of course would follow.

I think Mr. Ferris has some additional information on this.

Mr. FERRIS. Well, I would agree with you that Germany and Japan would be among those most seriously affected.

Senator EVANS. Aren't we really talking pretty seriously about the reallocation in terms of any major proportions at least between—what happens between the United States, Japan, Germany, and to a somewhat lesser degree, the United Kingdom and Canada? And beyond that, they fall off pretty rapidly, don't they?

Mr. **Ferris**. Those are the major participants. I would note that in the first cycle of the AST-4 exercise, which concerned using 1981 historical data, I believe there were 12 countries in the IEA which provided oil to the other 9 participants.

Senator **Evans**. I'm just trying to get the relevant sizes.

Well, there was some concern that was expressed earlier by Mr. Metzenbaum, and certainly expressed by others in this country of why should we share oil either directly or indirectly from our petroleum reserves or whatever our sources are during time of shortage when we are not very dependent on Middle East oil. Do you have any accurate picture as to the effect on our economy of severe oil shortages in the other major industrialized nations?

Mr. **Mendelowitz**. I would have to supply such information for the record if you desired it. We don't have it at hand. But, clearly, if there were a major economic decline in countries which are major markets for our exports, there will be a ripple effect in the United States in terms of lost jobs, lost exports, and lost production.

Senator **Evans**. Have we identified that very clearly elsewhere?

Mr. **Ferris**. There's been a number of econometric forecasts of what the impacts of oil supply disruptions can be on the various industrialized countries.

Senator **Evans**. It just seems to me that in order for us to—well, most nations and most people act in their own self-interest. And if it's a suggestion that we shouldn't share because we want to retain the oil for ourselves, it seems to me terribly important for us to very clearly point out the consequences on our own economy and on our own self-interest of doing just that.

I'm sure that there are, and I'm aware of a lot of econometric studies. It seems to me important to try to boil those down and to as clearly and as directly as possible identify the consequence of that so that people are better able to act in our own best interest.

Mr. **Mendelowitz**. Senator, I would like to add in response to the earlier part of your question that I view our activities under the IEA as in the interest and beneficial to the interests of American consumers.

The oil market is a world phenomenon. Oil is fundamentally a fungible product, and it's impossible to operate in the energy area, I believe, with the assumption that we can somehow isolate what goes on in this country with respect to the oil market from what goes on in the rest of the world.

The IEA program, the emergency response mechanism, the informal response mechanisms, the approach to building stocks to be used in an emergency, the approach to taking action to prevent a buildup of stocks in an emergency—all contribute to the ability of the United States to keep the price of oil and its distilled products to the consumer from rising more than is absolutely necessary, as justified by fundamental long-run shifts in supply and demand.

Senator **Evans**. I tend to agree with you. I'm, certainly from the knowledge I have now, a believer that these international agreements are in our best interest.

I was trying to ensure that the broadest number of people in this country understand that through the simplist, most direct, and straightforward, self-interest kind of identification. And I'm not sure, at least, that I've heard much of that up to now, and I think that's the task that we ought to set ourselves upon.

Mr. MENDELOWITZ. You know, I would——

The CHAIRMAN. I'd like to interrupt you so that I can go vote. The hearing will be in a short recess, pending the return of members from the rollcall vote they're now engaged in. I suspect it will be about 5 minutes.

[Whereupon, at 11 a.m., a recess was taken.]

The CHAIRMAN. The committee will come to order.

Senator Hecht.

Senator HECHT. Thank you, Mr. Chairman.

Mr. Mendelowitz, as you have noted, the United States has taken important steps to insulate itself from a disruption of Arab oil supplies. For example, we have reduced our dependence on the Arab oil to roughly 15 percent of all imports. We have also spent a great deal of taxpayers' money on the strategic petroleum reserve.

What steps have the other principal IEA member countries taken to protect themselves?

Mr. MENDELOWITZ. Under the IEA system, member countries are required to keep a reserve of 90 days of imported oil. The member countries have responded in different ways. Japan, for example, requires its companies to have on hand 90 days' supply of imported oil. And, the Government of Japan is building a national oil reserve similar to our strategic petroleum reserve.

The other IEA member countries, in addition to keeping a reserve, have developed demand restraint programs to use in the event of an emergency to reduce domestic consumption of oil.

It's important to remember that in a supply emergency, demand restraint and the drawdown of existing inventories should be viewed as equivalent undertakings, because whether you use a barrel less or you draw down a barrel from your strategic petroleum reserve, you still close that gap between supply and demand in the amount of one barrel.

I know that Mr. Ferris has some additional current information on what the other IEA member countries are doing. I think I might ask him to add some additional information.

Senator HECHT. Please, Mr. Ferris.

Mr. FERRIS. Well, most of the other countries have allocation programs for reducing the flow of oil, and many of them have developed substantial stocks, and they have voluntary programs of public information to encourage their consumers to reduce their consumption.

Their programs are targeted generally more toward the private individual than toward industry so that at least the GNP of the countries will continue at a better rate.

Senator HECHT. Do you think they should be doing more to carry their own weight?

Mr. MENDELOWITZ. I think that if you look at real emergency reserves, that is, not just what's on hand, but what, in fact, is available in the event of an emergency, you will find that because of the size of our strategic petroleum reserve, the United States has on hand more days of imported oil than any of the other IEA member countries.

This situation exists because of two factors. One is that our other partners in IEA are generally much more dependent on imported oil than we are. So it's easier for us to accumulate reserves against imported oil needs than it is for a country with a much higher level of import dependence.

Second, we as a country, or the administration, has made a policy decision that in the event of an oil supply emergency, demand restraint programs, run by the Government, will not be a major part of our response.

Our IEA partners have not made that same judgment, and they have on hand demand restraint programs that would be used and that are, for all intents and purposes, equivalent to the availability of a strategic petroleum reserve.

Senator HECHT. But do you treat voluntary demand restraint programs the same as mandatory ones?

Mr. MENDELOWITZ. I don't believe so.

Senator HECHT. No further questions, Mr. Chairman.

The CHAIRMAN. Thank you very much.

Senator Metzenbaum.

Senator METZENBAUM. Along the same line, Mr. Mendelowitz, is this Nation violating its obligations under the IEA agreement, which provides that each participating country shall at all times have ready a program of contingent oil demand restraint measures, enabling it to reduce its rate of final consumption?

Mr. MENDELOWITZ. Senator, I do not believe we are violating our obligations. The reason is that member countries have the option of either using demand restraint or available reserves in excess of the required 90 days to reduce our consumption of imported oil.

Senator METZENBAUM. Mr. Mendelowitz, I have the agreement before me. It doesn't say anything about that.

That may be a very, very liberal interpretation, but it doesn't say that. And it says that the standing group on emergency question shall, on a continuing basis, review and assess each participating country's program of demand restraint measures.

Now, letting oil out of the strategic petroleum reserve is not a demand restraint measure.

Mr. THOMAS. Senator, I'd like to respond to that, if I may.

Senator METZENBAUM. Certainly.

Mr. THOMAS. In 1982, I believe, the IEA made some additional decisions saying that price can be considered a major demand restraint approach in an emergency. And so they recognize the U.S. policy of allowing price to increase as a demand restraint approach. And I think that the United States has consistently said is that the principal U.S. demand restraint approach.

Senator METZENBAUM. Then the United States is following that position that—that's the go-it-alone approach of solving the oil shortage, and nobody else has that position, do they?

Mr. THOMAS. Well, I think the concern in the IEA that has been repeated on a number of occasions is that relying on an escalation of price alone is an inadequate demand restraint approach, and that you need——

Senator METZENBAUM. Is inadequate?

Mr. THOMAS. That's right. And that you need voluntary and mandatory programs to supplement that.

Senator METZENBAUM. So, therefore, Mr. Thomas, the IEA has said the price limitations is inadequate. The agreement says that we should have a demand restraint measures in effect. We don't have them, and we say all we've got is price. So we are, in effect, not acting in accordance with our commitment. Isn't that so?

Mr. MENDELOWITZ. Senator, I would like to refer to article 16 of the agreement which says: "When demand restraint is activated in accordance with this chapter, a participating country may substitute for demand restraint measures use of emergency reserves held in excess of its emergency reserve commitment as provided in the program."

Senator METZENBAUM. Yes. But, Mr. Mendelowitz, you and I would both agree that demand restraint measures have not been activated, and that the article that I read provides for what should occur when they have not been activated.

Mr. MENDELOWITZ. I think that the concern here is a very genuine one, because what you're referring to is one of the major problems highlighted by the U.S. participation in AST-4. And, as I said before, we view the AST-4 experience as a major success because it did force the administration to confront the inconsistency between its stated position of relying exclusively on price and our obligations under the IEA.

One of the events, or one of the——

Senator METZENBAUM. Could I paraphrase that? Would you say it was a worthwhile—how did you describe it—it was a success. Is that what you said? It was a success in proving how bad things would be. Is that what you're saying?

Mr. MENDELOWITZ. What I'm saying is, it was a success because it pointed out problems. These problems have been aired, and rather than ignoring them, I believe the administration has taken a positive response to trying to solve the problems that were highlighted by the test.

And I think that's the fundamental objective of a test, to find out if something works, and if it doesn't work, to try to identify the problem and correct it.

And so certainly, if that's the standard by which a test is going to be judged, I would say it was a success.

Senator METZENBAUM. Let me go to some other questions.

Can you tell me why France has declined not to participate in the IEA?

Mr. MENDELOWITZ. The French have concluded that their interests would be better served by maintaining bilateral agreements with OPEC governments.

France has pursued a go-it-alone strategy with respect to a number of international agreements. IEA is not the only one. And I would say that their attitude toward IEA is consistent with its attitude toward other international agreements.

Senator METZENBAUM. Didn't they also conclude that the IEA is confrontational and counter-productive? They said that the United States would dominate the IEA. It would be better to work out bilateral agreements with OPEC, and that the French population would rebel against sacrifices for other countries.

Mr. MENDELOWITZ. I think you're accurate. I would also like to point out that the French effected a major change in foreign policy in 1967; they abandoned certain countries with whom they had longstanding, warm relationships and arms supply agreements, with the intent of establishing close and warm relations with the Arabs, including Arab oil exporters. And what they chose to do when the IEA was created was consistent with that change in policy effected in 1967.

Senator METZENBAUM. Dr. Mendelowitz, the whole assumption of the IEA program and the oil companies' participation assumes that were there to be a shortage, that the nations or the IEA or somebody would somehow be able to control the oil companies. Whereas, we know that in past undertakings in 1973, we weren't able to control the U.S. oil companies in some of their activities on the high seas.

Isn't it a fact that there is no effective mechanism to control the oil companies; that they consider themselves international companies, that they don't consider they have a special loyalty to this Nation even though based here, and that realistically speaking, without that ability to effectively control the oil companies, the IEA is a nullity?

It's a long question. You can separate out as much as as you want.

Mr. MENDELOWITZ. It certainly is a very difficult question.

There is no question about the fact the oil companies are powerful institutions. By the same token, we believe that it would be impossible for the IEA system to work without the full participation of the oil companies. They make up the oil market. The 46 reporting companies that are a part of the IEA system are the vehicles for handling 70 to 80 percent of the Western World's oil.

So that I think that in answer to your question, if we're to have an organization like this, we must have the involvement and participation of the oil companies and, by the same token, we should do the best we can to insure that the public interest is not violated by their activities under this program.

And in that regard, we have vigorous oversight on the part of antitrust enforcers of the Federal Trade Commission and the Justice Department. Transcripts of all meetings of the companies are——

Senator METZENBAUM. Now wait a minute. Oversight, great, sounds wonderful. Query: Is there any program in place at the moment that should there be a shortage this afternoon, that we could control the oil companies and keep from selling their oil at market prices? Is there any way that we can control them, or anybody control them, IEA, the United States, whatever?

Mr. MENDELOWITZ. Oil to be supplied under the IEA system in the first cut is to be supplied under voluntary offers on the part of the companies. Those offers are contingent upon the agreement between the supplier and the receiver of the oil as to what price it's going to be exchanged at.

If the voluntary offer system breaks down, the Government has the authority to mandate the supply, or issue mandatory supply orders to the companies.

Senator METZENBAUM. How does our Government get that authority? Where do we have that authority in the law?

Mr. **Mendelowitz**. I believe that's under section 251 of the Energy Policy and Conservation Act.

Senator **Metzenbaum**. Under 251, we have the authority to tell oil companies to whom they may sell their oil, even though the oil is not located in this country?

Mr. **Mendelowitz**. My understanding is that's how it works. However, I should point out that that does not involve a Government determination of price. We have stated that we will not require a company to supply oil under a mandatory supply order unless either the price is agreed to beforehand, or the two parties agree to dispute settlement in the event that they can't resolve the price before the oil is transferred.

Senator **Metzenbaum**. So that we might just direct them where to sell the oil, but we'd have no impact whatsoever as to the price. And without having any impact upon the price, then isn't it a fact that the IEA whole concept would break down?

Mr. **Mendelowitz**. I think that we would have an impact on price, but I think we would have an impact on price based upon how the IEA system would impact on the world oil market.

If we have a situation in response to an emergency which: One, IEA members institute mandatory demand restraint programs; and two, inventories are drawn down to help close the gap between supply and demand, a reduction in the disequilibrium between price and demand will, in effect, help keep the price of oil lower than it would be in an emergency in which there was no coordinated response.

So I do believe that the IEA system should serve to keep the price of oil below what it would be otherwise in an emergency, and I think that serves the interest of the consumers of oil in this country.

Senator **Metzenbaum**. Let me get that straight again. Repeat that for me, because I lost you somewhere as to how we force the oil companies to maintain reasonable prices and not permit them to go to market levels and, at the same time, direct them how to allocate their oil. I lost how we do that.

Mr. **Mendelowitz**. Well, Senator, you phrase a very difficult question.

I think that clearly the current system does not involve the setting of price, or the control of price by the Government.

What the current system does do in an emergency is to provide a response in the form of increasing supplies in the marketplace and in the form of reducing demand through nonprice mechanisms in other IEA countries that would have an effect on the price of oil in the marketplace, that would, we believe, reduce the price increases below what they would be in the absence of the IEA system.

If we did not have the reserves, if we did not have the demand restraint programs in other countries, I believe that we should expect the price of oil would go much higher than would be the case with the activiation of the IEA system.

Senator **Metzenbaum**. I have to go vote.

The **Chairman**. We'll stand in recess at the call of the chair.

[Whereupon, at 11:25 a.m., a recess was taken.]

Senator **Evans**. How do we differ with the other major countries that I was referring to earlier?

Mr. **Mendelowitz**. In normal times the price of oil is the price of oil, and oil provided under long-term contracts—which really aren't long term anymore; they're several months is sold at a price which is usually not that different from the marginal amounts sold in the spot market.

The problem is that in past crises, the spot market has become the price leader, and price moved very quickly in the spot market as purchasers who were short of supplies went to the spot market to make up their shortages. Those holding inventories, who wanted to make a substantial gain on those inventories, went to the spot market to take advantage of the rapidly ratcheting price.

So that during an emergency, to say that you're going to trade oil at commercial prices is somewhat problematic, given the fact that we know that in an emergency the spot price is going to differ from the contract price.

Previously, the understanding in the IEA, as outlined in its procedures manual, was that the price at which allocated oil would be exchanged would be somewhere on the order of the term price. And it's clear that if you're going to have companies voluntarily offering oil for sale and there's a wide divergence between the term price and the spot price, they're going to feel substantially disadvantaged.

The current agreement that the IEA has reached is that the pricing principles are left open, except for the fact that it's now acknowledged that the price at which the voluntary oil will be traded at will be somewhere between the term price and the spot price, and it's up to the supplier and the purchaser to reach some agreement.

And because of the potential problems that exist in the ratcheting of the spot price and the divergence, between spot and contract price, we view this as both an untested and potentially problematic area.

The United States has consistently pushed for using the spot price as a reference price, and our partners have more generally pushed for using the term price.

Senator **Evans**. When you say somewhere between the two, that can at times be a pretty broad area, can't it?

Mr. **Mendelowitz**. I think that if I can venture sort of a hope, if the IEA system, in fact, works, and the combination of mandatory demand restraint, some price increase, and drawdowns of stocks works, hopefully we will avoid the kind of very rapid tripling of price that took place in 1979 and 1973-74, and we may not be faced with exactly the magnitude of the pricing problem that existed then. But, of course, we won't know until an emergency takes place and we try to use it.

Senator **Evans**. This brings up a different aspect of the whole pricing structure. To what degree are there differences in policy, and how much friction do they raise in the negotiations between the nations when you shift over and talk about retail pricing policies or what people do both currently and in time of an emergency? I rather suspect that some nations would suggest that their retail price of gasoline, for instance, is so much higher than ours that they have already imposed a restraint of sorts through price, and that we have some catching up to do during an emergency before we're even. Is that, in fact, what some of them are saying?

Mr. **Mendelowitz**. I would say that the issue of retail price was a greater problem some few years ago than it is now.

There seems to be a—there has been a shift in the position of the partners in IEA from one assuming that there would be very active price controls at the domestic level, to a position where I think our partners in IEA more readily recognize that it's impossible to isolate domestic prices from the world market.

Mr. Ferris was at the IEA this past week, and I think he has some even more current information to add with respect to that question.

Mr. **Ferris**. Well, I spoke to various officials in the IEA, and they seem to believe that most of the countries in the IEA have now accepted the fact that market price will have to operate in an emergency. And many of the countries may not employ price controls themselves in a future disruption, although that's hard to predict in advance. But there seems to be more of a consensus in the IEA on the need to let the market operate.

Senator **Evans**. What is the relative size of the SPR in other countries as compared with ours in relationship to their daily use?

Mr. **Ferris**. Well, every country is supposed to maintain a reserve equal to 90 days of its oil imports.

Senator **Evans**. I know they're supposed to, but where are they relative now, and are they approaching that?

Mr. **Ferris**. Well, there are about four or five countries which are under the 90-day requirement. Some of the countries are at about 90 days or a little bit above, and there are a few countries which are considerably above 90 days.

Senator **Evans**. OK. My other colleagues have had a chance to ask questions of this panel. So we thank you very much for your participation, even though, admittedly, interrupted from time to time.

We will call now on the next panel. Dr. Charles Ebinger, director, energy and strategic resources program from the Center for Strategic and International Studies, Georgetown; Dr. S. Fred Singer, Energy Policy Studies Center, University of Virginia; Dr. Elihu Bergman, executive director, Americans for Energy Independence; Mr. R. Thomas Van Arsdall, vice president, Agricultural Inputs and Services, National Council of Farmer Cooperatives.

We thank you gentlemen for coming. I understand that Dr. Singer has another conflicting engagement, and we will call on him first, and then we will go in the order that you appear on the witness list.

Dr. Singer.

STATEMENT OF DR. S. FRED SINGER, ENERGY POLICY STUDIES CENTER, UNIVERSITY OF VIRGINIA

Dr. **Singer**. Thank you.

My testimony is brief. I have a book which is much longer. I have 10 main points I'd like to make this morning.

Point No. 1. That oil emergency is a supply shortfall, for whatever reason, that drives up the price. That's how I define an emergency. And the price is, in fact, the best measure of a shortfall. It's better than any physical measure, such as barrels or percentages of supply or anything else. Price is the only measure that we can use.

Point No. 2. There's only one world market for oil. Therefore, when the price of oil goes up, it must go up for all consumers everywhere. That is, consumers in Japan will face a higher price, consumers in the United States, and consumers in Great Britain. They're all equally affected.

This is true even if there are no imports from the Persian Gulf or if there are no imports at all, as in Great Britain, they will also face the higher price. So import dependence is irrelevant to facing this higher price increase. And it's this higher price that makes an impact on people that we call an oil emergency.

Point No. 3. Any attempt by a government to circumvent somehow this price increase is bound to lead to some kind of a disaster. There's no way of getting around it. If you try to circumvent it by allocations or by demand restraints, you're simply substituting political judgments for a market.

We have had two oil crises in 1974 and 1979 because our Government did exactly that, they did not permit the price to rise to the world level.

Point No. 4. Because of the fact that there will be a price rise associated with an oil emergency, it would be wise if our Government would now institute an automatic scheme of income recycling so that the extra money that goes into the Treasury as the oil price goes up, would be recycled to poor people by automatic changes in the withholding tax rate and by increased assistance.

You understand, of course, that the Treasury gets a much enhanced income during an oil crisis because of the windfall profits tax.

Point No. 5. This price increase that I've discussed can be moderated by releasing stockpiled oil. The point is that any stockpile anywhere will do this, whether in the United States or in Japan or Europe, any stockpile oil put on the market will decrease the price of oil, or will moderate a price increase and will, therefore, benefit all consumers everywhere.

Point No. 6. This does not mean that the SPR releases should be coordinated. On the contrary, it probably would be harmful if this were done. It's probably best to just leave each country to decide how they wish to use their SPR; keeping in mind that any SPR oil anywhere would benefit all consumers.

All we should require, and I think we are requiring this, that each country maintain stockpiles roughly equivalent to 90 days of imports.

Point No. 7. As strange as it may seem, the country that has the greatest interest and incentive in keeping the price from rising should be Saudi Arabia. Therefore, it should be their task to maintain a very large stockpile and release oil in case of an oil emergency.

All indications are that they're preparing to do this. We should encourage them and even help them. Clearly, they would pay for their stockpile, we would not.

Point No. 8. We now turn to the U.S. strategic reserve. It's essential to test it. It has never been tested. We have no idea whether it will work. It should be tested all the way through to the refineries. The administrative mechanisms should be tested. The auctioning system should be tested. We should have a complete simulation of the system lasting for at least several days to be sure it works.

Point No. 9. In fact, we can start auctioning some of these stockpiled oil right now. I personaly would prefer that the Government, in handling and managing the strategic petroleum reserve, sell options on oil right now to refiners and to others at a certain strike price, each option to last for a certain time.

This privatizes the stockpile and removes it, somewhat, from the bureaucratic control that it's under now, and from the possibility that I see, that some of the oil may be allocated by nonmarket mechanisms.

The worst thing that could happen which is, that the bureaucrats will sit on the stockpile forever and ever, waiting for a rainy day which will never come, and all the investment that we have put into the stockpile will be to no avail.

My final point, No. 10, deals with the International Energy Agency. And here I would just like to make a few subpoints.

One is, the IEA was set up for the wrong reasons, as has already been pointed out. It was set up in response to the oil embargo, which never really was an embargo, it was misunderstood. It was set up as a counterploy as to OPEC. It was set up as a consumer cartel. It never did any of these things, nor will it ever do any of these things.

The main purpose for the IEA now is to coordinate this oil-sharing agreement. In my view, this agreement will not work, it will never work, and it will cost the U. S. consumer a great deal of money and a great deal of oil.

This oil-sharing agreement is either useless or preposterous, depending on the price. If the oil is to be traded at the spot price, then clearly the oil-sharing agreement is useless, you don't need it. Anybody can go out and buy oil at the spot market price. You don't need an IEA for that.

If the oil is to be traded at the price that existed before the emergency, then I would submit that the agreement is preposterous because it would penalize oil companies who are forced to sell oil that is worth more at a much lower price.

I think the system cannot work because, as has been pointed out, oil will always flow to the highest bidder—and it should flow to the highest bidder. That's what a market is for.

The worst aspect of the IEA, in my view, is that it could lead to allocation systems in the United States because it is in itself an allocation system.

So I think it's inimitable to the American free enterprise system and, therefore, I would be extremely careful with it.

Whatever useful functions the IEA may have, they could be fulfilled by other bodies, such as the OECD, for example, coordination of research.

I conclude, therefore, that the IEA does not do anything for us, doesn't help us, and represents a real threat to a loss in oil and money.

[The prepared statement of Mr. Singer follows:]

Testimony of Professor S. Fred Singer
Energy Policy Studies Center
University of Virginia, Charlottesville, VA

Dealing with Oil Emergencies

By now half the experts worry about a price drop in world oil, and the other half about a price rise due to supply interruptions in the Persian Gulf. (There are some, myself included, who expect both kinds of price excursions.) The Iran - Iraq war has become the key item. When it heats up, supply interruptions become a fashionable topic. If it should be settled, the extra oil from Iraq's exports will certainly drive the price down. As far as I can tell, the war is very good for the options and futures brokers who swear by Energy Future and Global Insecurity.

The accepted wisdom has been that in case of a supply cutoff the Strategic Petroleum Reserve is vital to U.S. security and that it needs to be built up quickly to 750 million barrels in order to protect us. (The Harvard Energy Security project wants an SPR of 1,800 mb.) But the experts are less worried now: the SPR is already up to 400 mb, our imports are way down (5mb per day vs. an earlier expected 12 mbd), and Saudi Arabia, our erstwhile embargoer, now ranks No. 6 among our importers. And if all else fails, in case of a real catastrophe, we can look to an oil-sharing plan of the International Energy Agency to pull us out.

All of this, of course, is complete and utter rubbish. There is only one world oil market -- provided we don't revert to import/export controls and price controls. In case of a major supply shortfall -- whether willful or accidental -- that cannot be made up by excess production capacity somewhere else, the world price must rise. And it must rise for everyone, including the U.S. -- no matter what our level of imports is and from whom. All those who gloat about the fact that Saudi imports are negligible should be required to write one hundred times on a blackboard: Oil is fungible. It will be swapped out in the market by traders until the price is roughly equal everywhere. Our stockpile and everyone else's SPR can moderate the rise in this single price; countries that have not invested in a stockpile will get a free ride, benefiting as much ascountries that have established a costly SPR.

As a matter of equity, each oil-consuming nation should hold strategic stocks roughly in proportion to their net imports. (As net exporters, Canada, Gt. Britain, and Norway would not need to invest in an SPR). As far as release of the oil is concerned, no coordination is necessary among the nations. It would probably do more harm than good. By privatizing the SPR, we would essentially preclude such international controls.

The IEA oil-sharing agreement to equalize shortages is of course either useless or ridiculous. The choice between these unattractive alternatives depends on the price level at which the sharing takes place. This subject -- like sex among the Victorians -- is not discussed in the polite circles of the IEA. It stands to reason, however, that if the sharing of oil among members nations takes place at the actual world price, i.e., the spot price existing during the emergency, then the IEA scheme is not needed. Anyone can buy oil at the high spot price; that's the significance of a spot price. But if the sharing is to be done at the much lower pre-emergency price, then the scheme becomes a clear subsidy to whoever receives oil. It's a safe assumption that it won't get done.

The problem is that the international bureaucrats, as well as many IEA member countries, believe in price controls and non-market allocations during emergencies. They are not alone. We have folks here, conservatives no less, who swear by the free market -- except during emergencies. Our Department of Energy used to be populated with such people. But it is just during emergencies where the market can avoid the crises that we experienced in 1974 and 1979, when oil prices were held fixed and free markets, i.e. allocation by price, were not permitted to work.

The federal bureaucracy which created these memorable crises has now metastasized into numerous state oil emergency offices, all staffed with eager civil servants waiting for the next crisis. They still remember that the feds gave each state governor a percentage of the state allocation "for hardship cases". Guess who got this price-controlled gasoline! The poor? Guess again! Allocations of goodies by political channels does have many advantages for an incumbent governor, which would not be possible if prices were free.

It's no wonder that the DOE was jumped on by an unholy alliance of IEA, State Department, and state emergency types when it refused to play the price control game during an IEAoil-sharing exercise last year. The Washington Post obligingly publicized a leaked, lower-level State Department memo critizing the DOE; the IEA promised to send a task force "to determine where the Reagan administration's free-market policies fit in with those of the other 20 nations, which have standby regulations to restrain demand and prices and allocate supply in crises;" state officials made suitable clucking noises; and Rep. Mike Synar (D-Okla) opened hearings: "I believe in the free market, but I am a pragmatist" he said.

Having taken two vital steps, namely to decontrol oil prices and then to veto oil emergency allocation legislation, President Reagan still faces several important tasks to avoid a return to price controls: 1) Convince Congress to permit the export of Alaskan oil and gas. 2) Convince our allies to revamp the IEA agreement or to dump it. 3) Put in place an income-recycling scheme to prevent real hardship to the poor during an oil price rise 4) Remove the DOE, or any bureaucracy which could administer price controls. 5) Address the management problem of the SPR.

It goes without saying that the SPR must be tested, not only physically, but all the way through the selling, transporting and refining of oil. Otherwise we have a $15 billion white elephant, soon to grow to over $25 billion. Pumping alone does not count. I would like to see the actual 1.7 mbd of SPR oil (the target maximum) flow all the way through the U.S. refinery system, for at least a few days.

But when would this oil really flow? There is a long-standing debate within the government about whether there ought to be a pre-determined trigger (which should, of course, be a price trigger), and whether such a trigger should be announced ahead of time. Bureaucrats (of either party) resist facing these problems. They talk about physical supply shortfalls (which are difficult to measure) rather than price jumps (which are not). They don't like decision rules which limit their actions. They much prefer to use their "judgement" during an emergency rather than trust the market. My fear is that they will always opt to leave the oil in the ground, waiting for the proverbial "rainy day" which may never come.

Now that we have a governmental stockpile, we should privatize it. The most direct way is to sell options on all or part of the oil. Each month, options with various strike prices and expiration dates could be auctioned off to the highest bidders. Once in private hands, a market for these options would be established. Selling such options would provide revenue to the government, but also get some of the oil flowing. Since it must be auctioned off to refineries eventually, why not experiment with a scheme which amounts to an advance auction.

Once the SPR is privatized, it may actually become useful. It serves as a psychological barrier to stem congressional efforts to re-establish price controls and political allocation systems during "emergencies". One can always point to the SPR and say: There's our protection; we don't need controls. (It may be too difficult to explain that the only danger is a price rise and that anyone's stockpile anywhere in the world will protect against the price increase that goes with an uncompensated supply interruption).

That's why we should applaud the Saudi effort to build up a sizeable stockpile of oil outside of Arabia. Because it draws from unused production capacity, it does not put upward pressure on oil prices. And when released, presumably during a price rise, it will moderate and dampen that price rise to the benefit of all consumers.

And it is good business for the Saudis. Unlike oil consumers who pay a price of about $30 per barrel, the Saudis only pay the cost, less than $1 per barrel. (Since lifting oil may give them the associated gas needed for internal purposes, their effective cost may be close to zero.)

The stockpile gives them both money and power. It's just as good as gold, maybe even better. It is a nest egg in case things go wrong in Arabia. It protects them from many forms of blackmail, and makes them less vulnerable to temporary interruptions caused by attacks on loading platforms or shipping in the Persian Gulf.

A large stockpile of oil would also enable them to moderate any price increase by selling more oil than they can physically produce. Further, the use of some of their presently unused excess production capacity -- about 7 mbd and greater by far than their present production of 4-5mbd -- for building up stored oil postpones expensive capital investments to develop new fields.

Even more important for protecting their long-term market, it prevents price rises that encourage conservation and fuel switching on the part of consumers. The Saudis would have been better off if they had had a stockpile to moderate or eliminate the price rise of 1979-80, which was psychologically based.

It is in the Saudi's self-interest to build a huge stockpile (at low cost to them) to produce a stable world oil price. Once this fact is generally recognized, it will be easier for consumer nations to institute more rational approaches to managing their SPR's and deal with other oil security problems.

The **Chairman**. Thank you, sir.

Dr. Singer, I understand that you have another commitment that will require you to leave very quickly.

Dr. **Singer**. Yes, sir.

The **Chairman**. I don't mean to delay that. I respect that. Although your testimony invites some expansion by way of asking questions.

Let me just ask one, and then I will ask the others if they have questions of you, and then we can allow you to leave and make your other commitments.

You said at the bottom of page 1 and the top of page 2 something with which I totally agree, in that oil is fungible and that we can't take any solace in the fact that our imports are shifted in character from one place in the world to another.

I agree totally with that point. But I think the other basic point that you make is that the IEA is an allocation system, and you see it forcing an allocation system internationally which will force a similar domestic allocation system. Isn't that your basic point?

Dr. **Singer**. I see that there's a danger. I don't think it necessarily has to be that way.

The **Chairman**. Is there any way in which U.S. supplies are insulated from world supplies?

Dr. **Singer**. No, I don't see that. I see one world market.

The **Chairman**. And inevitably, no matter what we do, whether we have an IEA or whether we don't have an IEA?

Dr. **Singer**. That is correct.

The **Chairman**. And that, therefore, since you don't want the allocation system, you don't want it domestically, you don't want it internationally, if I understand you correctly?

Dr. **Singer**. That's correct. It won't work, in any case.

The **Chairman**. Thank you very much.

Senator Evans.

Senator **Evans**. That's a very interesting set of remarks.

I wonder if you would comment at all on the general question I asked earlier on the identifiable effects on our economy of oil shortages that affect other industrialized nations, and to what degree we have done a good job of trying to identify that so people do act in their own best interest in this country?

Dr. **Singer**. If there's a shortage, that is, if the price goes up, it will affect the inputs to all produced goods and, therefore, raise the price of goods. It will also lower the standard of living for people, because they will have to spend more of their income on fuel.

The purpose of an income recycling system, which has been proposed by a number of Senators—I'm not the originator of this proposal, it's a bipartisan proposal—is to at least protect the poorer people in our population from the effects of these price increases, but not from the price increases themselves.

There's no way of getting around the fact that if there is less oil, the price has to go up.

Senator **Evans**. And that, in spite of the fact that we may be essentially or reasonably self-sufficient in our oil production within this Nation, and with a cutoff of supply and the Middle East, other nations may be hit much harder, but your thesis is that that will very quickly spread so that we will be essentially as adversely affected as Japan, say, or other nations?

Dr. SINGER. Take for example Great Britain, which does not import oil, they export oil. Their price will go up, too. Because what will happen is, if the world price goes up, British oil companies will export oil to the world up to a point, where they can get more money by exporting than they can from British consumers. The British consumers will have to pay more until they pay as much as the world market.

Senator EVANS. Do you think we're at a position now where excess capacity, or potential excess capacity is such that a cutoff from the Persian Gulf could be gotten from other sources and there wouldn't be any substantial decline in the amount of oil flowing in th world. And if, in fact, that's the case currently, would you have any sharp upward pressure on prices?

Dr. SINGER. I don't think we would at this time. We are in a position where there's a lot of excess capacity in the world, so that any interruption is likely to not put any pressure on price.

We have, for example, in the last 3 years, seen Saudi Arabia reduce it's production from 10.5 million barrels a day to 3. That's a huge decline, and it has had no affect on the price. What it has done, it has kept the price from falling, but it has not——

Senator EVANS. So in that respect it has had an effect on price?

Dr. SINGER. Yes, of course, but it has not raised the price.

Senator EVANS. Thank you, Mr. Chairman.

The CHAIRMAN. Senator Hecht?

Senator HECHT. Dr. Singer, absent an IEA agreement, what step would you recommend for each member country, including the United States, to help prevent a price flyup from occurring?

Dr. SINGER. I believe that release of stockpile oil is probably the best way to moderate any price increase and maintain it at a reasonable level.

Senator HECHT. Is there a Government role in helping prevent a price flyup?

Dr. SINGER. Yes. The Government can manage the stockpile in such a way that it will not be kept in the ground forever, but it will be released when the prices rise by a certain amount.

One automatic way of doing this is to sell auctions, as I have indicated earlier. I like this method, because it privatizes the stockpile. Another method is for the Government to try to do the same thing administratively; that is to say, if the price rises by so many percent, we will release stockpile oil, or we will sell it to the highest bidder.

Senator HECHT. Thank you. No further questions, Mr. Chairman.

The CHAIRMAN. Only one other question. I'm somewhat interested in the way we focus our concerns on one problem and sometimes fail to look at other problems. That's often the case around here. We respond to the immediate question and not the broader questions.

I always wonder why those who advocate recycling of revenues assume that the Government is terrible in allocating supplies of oil but marvelous in allocating supplies of money.

Dr. SINGER. That's a very good comment.

The CHAIRMAN. Thank you, very much.

Dr. **Singer**. Yes.

The **Chairman**. As I understand, Dr. Singer, you had to leave early.

Dr. **Singer**. Yes.

The **Chairman**. Thank you very much for being here this morning.

Dr. **Singer**. Thank you very much.

The **Chairman**. We're glad to be able to accommodate to your schedule.

Dr. Ebinger.

STATEMENT OF DR. CHARLES K. EBINGER, DIRECTOR, ENERGY AND STRATEGIC RESOURCES PROGRAM, CENTER FOR STRATEGIC AND INTERNATIONAL STUDIES, GEORGETOWN UNIVERSITY; ACCOMPANIED BY JONATHAN B. STEIN, RESEARCH ASSOCIATE

Dr. **Ebinger**. Thank you, Senator McClure.

I'm here this morning with a colleague, Mr. Jonathan Stein, who is a research associate in our program at the center. Mr. Stein would also be available for any questioning from members of the panel.

We would like to add our voices to those supporting a strenghtened IEA, particularly the oil-sharing provisions as enunciated in the International Energy Program.

That program known as the IEP, also calls, very importantly, for the maintenance of minimum stock levels for the IEA's 21 member states, emergency demand restraint levels, as well as initiatives to foster greater energy development, especially of nonoil substitutes.

The IEP remains as much a strategic necessity today as it was 10 years ago upon its inception, despite the temporary shift in the world oil market. And we stress temporary, because there can be no doubt that economic resource and geopolitical variables will in the future combine to reverse the supply overhang now characterizing the world oil market.

We are concerned that too many energy economists and policy analysts have rushed to conclude that on the basis of reduced OECD demand between 1979 and 1984. World energy markets out to the turn of the century will look remarkably similar to those of today; namely, weak oil demand, stable or declining prices, continued conservation and increased interfuel substitution.

In our view, there is simply no quantitative method that adequately accounts for significant political and social dynamics that affect the world oil market.

In contrast then to the bulk of recent energy analyses, offering sanguine future scenarios, we would caution against undue optimism on the basis of both energy and geopolitical trends. A few of the often overlooked, yet salient energy and economic factors, and in the interest of time, I won't list all of those.

To this list must be added, however, the poor investment and taxation climate for future energy development, especially in the United States and Canadian Arctic and in the Norwegian Sea, as well as for alternative fuels, especially synthetics.

The environmental and safety problems with coal and nuclear power in the United States and Western Europe and the fact—and this is a critical fact—that 40 percent of global oil reserves and 70 percent of present excess productive capacity is located in one of the most volatile regions of the world; namely, the Persian Gulf.

I think we should remember that both the oil shocks of the early 1970's were sparked by significant political conflict, orginating in the Middle East. And some of the more significant geopolitical variables that we continue to be concerned about are obviously the spread of Shiite Fundamentalism, the various scenarios that have been put forth about the possibilities of the hostilities between Iran and Iraq expanding either to close the Strait of Hormuz or leading to a destruction of oil facilities elsewhere in the gulf.

While not as much commented upon, the very serious debts and political problems in other oil producers, such as Mexico, Venezuela, Indonesia, and Nigeria, which may well press those Governments to become price hawks.

And finally, of course, the continued conflict in the Middle East in the Arab-Israli dispute, which always has the possibility of expanding elsewhere in the region.

The trends cited above demonstrate, in our view, the underlying vulnerabilities in the world oil market and the tremendous uncertainty looming ahead.

We are not predicting disaster, but we are concerned about the advanced degree of complacency now firmly entrenched in all-too-much of the energy policy community.

We function in a world economy characterized by the workings, as several other panelists have said here today, of a single oil market, in which the price of a barrel of crude oil produced in the Persian Gulf varies only slightly, owing to quality differentials, from that produced in west Texas or the North Sea.

As long as the price of an incremental barrel of oil traded on world markets is set in the Persian Gulf, the locus of residual world export capacity, then political and military events in that region will remain paramount security concerns irrespective of the quantity of oil imported by the United States; a point shared with Dr. Singer.

The price effects of an oil supply disruption will eventually filter through to any economy well integrated into the present structure of world trade, regardless of emergency price controls. So it is very much in our national interest to prevent supply disruptions if possible, or to mitigate their adverse consequences to the maximum extent.

As the IEA's largest consumer, we thereby provide disincentives for major oil companies and independents based in the United States from bidding up the spot price.

Any oil we share with our allies, and the precise amounts promise to be relatively miniscule in relation to our total consumption, benefits United States consumers to the extent that we help avert a major bidding war within the IEA family for scarce world supply.

As the alliance leader, and as the largest oil-consuming country, the United States thus commits itself to act on behalf of international price restraint and general OECD welfare. A goal, in our view, clearly as worthy as American military leadership in NATO.

In much the same way that alliance members agree that an attack on one ally constitutes an attack on all, the IEA agreement similarly regards a member state's shortfall as worthy of joint action.

The IEP allows for far greater cooperation than would otherwise be possible because of the information system and consultative framework administered by the IEA Secretariat, and the participation of the private sector in the IAB.

In the absence of such a joint international system, it is improbable that joint action can be facilitated on a timely basis.

As a forum for rapid communication, the IEP serves to promote prompt international action as a crisis unfolds.

In 1980, for example, during the early days of the Iran-Iraq fighting, the IEA helped coordinate and speed the liquidation of company stocks. It is conceivable that in a more chaotic consumer environment and without adequate information sharing, many companies would have begun restocking, in anticipation of higher prices to come.

In closing, we would urge that the U.S. commitment to the IEA remain strong, and that the U.S. Government continue to work to improve both the short-term oil-sharing provisions and the longer term substitution programs.

In this regard, greater attention must be paid to subtrigger crises, those affecting less than 7 percent of IEA supplies in a general embargo or shortfall.

Suggestions have been made, for example, that a small percentage of strategic stocks could be set aside for such situations. The pricing of IEA allocations is another difficult problem, and will remain politically vexing, but attempts should be made to grapple with a variety of possible scenarios.

Disruptions in world oil supplies remain a strategic challenge today and, in our view, will only worsen in the future.

The benefits of international cooperation with our friends and allies in the IEA are potentially very great, and have already paid off, in that the IEA has led the debate on guidelines for oil-use reductions necessary to make the long-term IEP plan work.

In periods of tighter supply, the IEA serves as a deterrent to hostile embargos. Finally, the IEP must be measured—and this is a critical point—against the GNP losses from past and projected supply interruptions.

The OECD has estimated that $360 billion in lost gross resulted from the 1979 crisis in 1980 alone, and that a further $620 billion was lost in 1981.

The cost of strategic stockpiling and emergency oil-sharing programs amount to a fraction of this kind of GNP loss. If the next crisis exceeds the last one in price escalation, then the United States will suffer the consequences as much as any of our OECD or IEA partners.

With so much at stake for such little cost to the American taxpayers, we believe the United States cannot afford not to participate in the IEP.

Thank you, Mr. Chairman.

[The prepared statement of Dr. Ebinger follows:]

CSIS
Center for Strategic & International Studies
Georgetown University • Washington DC

Testimony submitted to the
Senate Energy and Natural Resources Committee

"The International Energy Program:
A Strategic Necessity"

By

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and

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March 30, 1984

We would like to thank the Committee for the opportunity to testify before you today on the subject of the International Energy Agency (IEA). Our views are our own and not those of the Center for Strategic and International Studies, which takes no institutional position on issues. CSIS is affiliated with Georgetown University, and conducts independent foreign policy research across a broad spectrum of topics.

We would like to add our voices to those supporting a strengthened IEA, particularly the oil-sharing provisions as enunciated in the International Energy Program. That program, known as the IEP, also calls for the maintenance of minimum stock levels for the IEA's 21 member-states, emergency demand-restraint measures, and initiatives to foster greater energy development especially of non-oil substitutes. The IEP remains as much a strategic necessity today as it was ten years ago upon its inception, despite the temporary shift in the world oil market.

We stress 'temporary' because there can be no doubt that economic, resource, and geopolitical variables will in the future combine to reverse the supply overhang now characterizing the world oil market. The market's highly cyclical nature since 1973 together with greatly increased government control over the production and trade of crude oil and refined products alone demonstrate the requirement for international consumer cooperation. We are concerned that too many energy economists and policy analysts have rushed to conclude that, on the basis of reduced OECD demand between 1979-1983, world energy markets to 2000 will look remarkably similar to those of today: weak oil demand, stable or declining prices, continued conservation,and increased inter-fuel substitution.

We emphatically disagree with the analyses pointing to continued stagnation in energy markets based solely or largely upon econometric extrapolations. While economic modelling serves a limited though useful purpose if the modeller's assumptions are explicit and realistic, there is simply no quantitative method that adequately accounts for significant political and social dynamics. In contrast, then, to the bulk of recent energy analyses offering sanguine future scenarios, we would caution against undue optimism on the basis of both energy-economic and geopolitical trends. A few of the often overlooked yet salient energy and economic factors include the following:

- increasing internal OPEC oil consumption and the prospect of greater-than-projected non-OPEC LDC oil demand, projected to grow by 2 mmbd and 3 mmbd respectively to 1990, (with the latter group growing by more than 6 mmbd by the mid-1990s);
- demand restraint and substitution difficulties within the Soviet bloc promising to limit the timely switch to non-oil fuels, which with lower Soviet oil output will greatly reduce the bloc's exportable oil surplus from its present record levels (about 1.9 mmbd of crude and products in 1983);
- increasing oil demand in the People's Republic of China, threatening to limit its 1990 oil exports to no more than 0.5 mmbd despite production possibilities of 4 mmbd. If new production does not come on stream as rapidly as projected China could become a net oil importer in the 1990s;
- increasing oil demand and slower oil production growth in Mexico;
- declining North Sea oil output from the U.K. sector after 1986-1987, and from the Norwegian sector after the early 1990s;
- U.S. Alaskan North Slope production declines after 1987 unless prospective offshore acreage comes rapidly on stream. The recent failure at Mukluk gives little cause to be sanguine concerning a reversal of this trend. Recent finds offshore California will only compensate for part of Alaska's decline;
- the prospect of continued low Saudi output hovering around 5 mmbd;
- the unremitting decline in world reserves-to-production ratios, temporarily slowed in the past few years, will begin to accelerate as world demand increases;
- the rise in U.S. oil imports since late 1983 and the prospect of even greater imports in the next few years;

- the probability that much of the oil and energy demand lost during the recession will return with economic recovery.

To this list must be added the poor investment and taxation climate for frontier energy development (especially in the U.S. and Canadian Arctic and in the Norwegian Sea) and for alternative fuels, especially synthetics; the environmental and safety problems with coal and nuclear in the United States and Europe; and the fact that 40% of global oil reserves and 70% of present excess production capacity is located in one of the most volatile regions in the world - the Persian Gulf. The Gulf is also the world's cheapest locale to produce oil, at $0.50-1.00/bbl. It should be recalled that during the second oil shock of 1979, the total removed from world markets was only 0.5 mmbd - yet the price rapidly increased from $13/bbl in 1978 to more than $18.50/bbl in early 1979 to nearly $31/bbl in 1980 and $34/bbl in 1981, the end-result of the initial 1979 spot market price spike engendered by the inventory panic caused by the Iranian shutdown.

In fact, both of the 1970s oil shocks were sparked by political conflict originating in the Middle East. Some of the more significant geopolitical variables we would include are:

- political, military, economic, and social challenges confronting the traditional monarchies of the Middle East - since 1945, Algeria, Libya, South Yemen, Syria, Iraq, and Iran have undergone radical change often inimical to Western interests;

- the spread of Shiite fundamentalism (via an Iranian victory in the Iran-Iraq war or through clerical and media dissemination) poses severe problems to Sunni political legitimacy and Saudi-led oil price moderation;

- the renewed possibility that Iran may attempt to seal off the Strait of Hormuz while sabotaging Arab Gulf production facilities;

- the very real likelihood that OPEC member-states outside the Persian Gulf will not move to increase oil production and exports in a supply disruption, but will instead hold off on additional exports and speculate that spot prices will rapidly increase - thus enabling them to sell less oil for more dollars;

- debt and political problems in Mexico, Venezuela, Indonesia, and Nigeria pushing their governments to collaborate with the price-hawks within OPEC (Algeria, Libya, Iran) now clamoring for higher prices;

- new export pipelines to the Red Sea or the Mediterranean notwithstanding, it should be borne in mind that all major export pipelines have been attacked in the past and that terrorism, changes in political relations between states, and large-scale military attack remain ever-present threats;

- the broader Arab-Israeli conflict, which feeds into many of the Middle East's outstanding problems, shows no sign of early abatement or relaxation of tension and could well lead to renewed Palestinian or other radicalism (especially in the Persian Gulf) against those Arab regimes who are broadly friendly to U.S. interests.

The trends cited above demonstrate the underlying vulnerabilities in the world oil market and the tremendous uncertainty looming ahead. We are not predicting disaster, but we are concerned about the advanced degree of complacency now firmly entrenched in much of the policy community. Energy efficiency and oil substitution have taken hold in many applications, and conservation has moved forward, but it seems clear that additional savings and efficiencies will be wrung out only at much greater cost in the future because we have entered the period of diminishing returns (at least for the near-to-medium term). For example, oil-fired electricity now represents only 6-7% of total utility generation, so progress in this one crucial sector has just about run its course.

We function in a world economy characterized by the workings of a single oil market, in which the price of a barrel of crude oil produced in the Persian Gulf varies only slightly (owing to quality differentials) from that produced in West Texas or the North Sea. This is so because world supply and demand levels are primarily affected by the actions of numerous exporting and importing companies and governments, in which the United States plays a significant but not a controlling part. As long as the price of an incremental barrel of oil traded on world markets is set in the Persian Gulf - the locus of residual world export capacity - then political and military events in that region will remain paramount security concerns irrespective of the quantity of oil imported by the United States. The price effects of an oil supply disruption will eventually filter through to any economy well integrated into the present structure of world trade, regardless of emergency price controls, so it is very much in our national interest to prevent supply disruptions if possible or mitigate their adverse consequences to the maximum extent.

The members of the IEA are the world's largest oil consumers as a group, accounting for roughly 3/5 of daily world oil demand. U.S. participation in the IEP bolsters consuming countries everywhere because we have agreed to restrain demand and release a portion of our strategic stocks into the U.S. market. As the IEA's largest consumer, we thereby provide disincentives for major oil companies and independents based in the U.S. from bidding up the spot price. Any oil we share with our allies, and the precise amounts promise to remain relatively miniscule in relation to our total consumption, benefits U.S. consumers to the extent that we help avert a major bidding war within the IEA family for scarce world supplies. As the alliance leader and as the largest oil consuming country, the United States thus commits itself to act on behalf of international price restraint and OECD welfare - a goal as worthy as American military leadership in NATO. In much the same way that alliance members agree that an attack on one ally constitutes an attack on all, the IEA agreement similarly regards a member-state's shortfall as worthy of joint action.

The IEP allows for far greater cooperation than would otherwise be possible because of the information system and consultative framework administered by the IEA Secretariat, and the participation of the private sector in the Industry Advisory Board (IAB). In the absence of such an international system, it is improbable that joint action can be facilitated on a timely basis. As a forum for rapid communication, the IEP serves to promote prompt international action as a crisis unfolds: in 1980, for example, during the early days of the Iran-Iraq fighting the IEA helped coordinate and speed the liquidation of company stocks. It is conceivable that in a more chaotic consumer environment and without adequate information-sharing, many companies would have begun re-stocking in anticipation of still higher prices to come. It is in this context that we would like to sound a clarion call for the U.S. Congress not to allow the limited anti-trust immunity for those American companies participating in the IAB to be subject to periodic political manipulation. In the absence of such limited immunity, oil company executives will shy away from participation making it virtually impossible for the IEA Secretariat to have access to timely market information so vital to the effective functioning of the IEP.

The U.S. Congress should reject the arguments of those who see oil industry participation in the IEA as a smokescreen for price collusion by the international oil companies and act in a statesmanlike way in concert with our European, Japanese, Australian and New Zealand allies to have a strong IEP agreement in place to deal in concert with severe challenges that will continue to plague access to oil supplies for the remainder of the century.

In closing, we would urge that the U.S. commitment to the IEA remain strong and that the United States Government continue to work to improve both the short-term oil sharing provisions and the longer-term substitution programs. In this regard, greater attention must be paid to sub-trigger crises (those affecting less than 7% of IEA supplies in a general embargo or shortfall); suggestions have been made, for example, that a small percentage of strategic stocks be set aside for such situations. The pricing of IEA allocations is another difficult problem and will remain politically vexing, but attempts should be made to grapple with a variety of scenarios.

Disruptions in world oil supplies remain a strategic challenge today, and will only worsen in the future. The benefits of international cooperation with our friends and allies in the IEA are potentially very great, and have already paid off in that the IEA has led the debate on guidelines for oil-use reductions necessary to make the long-term IEP plan work. In periods of tighter supply, the IEA serves as a deterrent to hostile embargos. Finally, the IEP must be measured against GNP losses from past and projected supply interruptions. The OECD has estimated that $360 billion in lost growth resulted from the 1979 crisis in 1980, and that a further $620 billion was lost in 1981. The costs of strategic stockpiling and emergency oil-sharing programs amount to a fraction of this kind of GNP loss. If the next crisis exceeds the last one in price escalation, then the United States will suffer the consequences as much as any of our OECD partners. With so much at stake for such little cost to tax-payers, the United States cannot afford not to participate in the IEP.

The **Chairman**. Thank you very much, Dr. Ebinger.

Next panelist, Dr. Bergman.

Dr. **Bergman**. Thank you very much, Mr. Chairman.

Senator **Warner**. Mr. Chairman, before we go to the next panelist, I want to congratulate Dr. Ebinger on that statement. It reflects the excellence the Senate often provides the Congress.

Dr. **Ebinger**. Thank you, Senator Warner.

The **Chairman**. Dr. Bergman.

STATEMENT OF DR. ELIHU BERGMAN, EXECUTIVE DIRECTOR, AMERICANS FOR ENERGY INDEPENDENCE

Dr. **Bergman**. Thank you, Mr. Chairman.

We have made available a statement for the record, and I would just like to take a few moments to make a few supplemental points.

First of all, let me commend this committee once more for providing the most prestigious platform in the country for the continuing discussion of emergency preparedness. It's necessary. It's enlightening. Just 1 week ago, Mr. Chairman, I met with a group of State legislators in Boise, ID, to discuss the energy outlook, the national energy outlook. One of the issues——

The **Chairman**. I want to congratulate you for being there. Of course, that's the center of the universe.

Mr. **Bergman**. Well, it was a pleasure. I also had the fringe benefit of a weekend at Sun Valley. So you can understand the attractiveness of the visit.

But a number of the questions concerned emergency preparedness, and the Iraq-Iran war. And I was just delighted to be able to tell them about the work of this committee, under your leadership and your commitment, for keeping this issue before the American public.

Your fellow Idahoans were very proud of you.

The **Chairman**. Thank you, sir.

Dr. **Bergman**. One more personal note. I'm delighted that my home State Senator, Dan Evans, has joined this committee, and will be able to bring his great experience as Governor of our State and his involvement in northwest energy issues to the Senate. It's good to see you here, Senator Evans.

This discussion we're having today, I think, is taking place in a timely environment, because the purpose, the objective for which IEA was set up, to provide a deterrent, could happen next week.

We're seeing a war of desperation, an increasing war of desperation between Iraq and Iran on the Persian Gulf.

One element in that war is the time constraint that both countries feel; Iraq, desperate to end the war, Iran, desperate to achieve its objectives, its outcomes before Iraq can restore oil exports and restore a more or less healthy economy that will enable it to proceed with both development and further financing of the war.

It is said that we're talking about a timespan of 18 months. We have seen evidence of this desperation in Iraqi resort to the use of poison gas, chemical weapons, and the continuing Iranian utilization of untrained adolescents to clear minefields.

Just this past week we saw evidence of something you pointed our earlier, Mr. Chairman, which is the whole irrationality of the situation, and probably its most dangerous element, where the Iraqies for the first time used their French-supplied Super Etendard aircraft, equipped with Exocet missiles against a Greek ship leaving Kuwait, Kuwait being an ally of Iraq.

Now, if this report is correct, it is incomprehensible that it happened in that way. But I think what it represents is the opportunities for and the likelihood of irrationalities in this conflict that increase the threat to oil supplies through the gulf from major oil producing countries.

Iran really doesn't have to close the Strait of Hormuz, nor could it, to create an interruption of oil supplies from the gulf.

We're exposed, we're very much exposed to the consequences of these irrationalities which are likely to increase. It's a dangerous—it's a very dangerous situation.

The CHAIRMAN. Dr. Bergman, I'm afraid I'm going to have to interrupt so that we can go and answer that current rollcall. I apologize for the frequent interruptions. I hope that members of the panel can remain for a few minutes yet so that we can complete this panel and the questioning of the witnesses.

We will stand in recess then, subject to the call of the Chair.

[Whereupon, at 12:07, a recess was taken.]

The CHAIRMAN. Dr. Bergman, will you please continue.

Dr. BERGMAN. Yes, sir.

We heard in previous testimony about some of the adversities that a brief supply interrution on the Persian Gulf would have. Certainly, in terms of supply, it wouldn't affect the United States. In terms of price, analyses over the past few months have shown that it could create a savaging impact. For example, Wharton Econometrics Forecasting did a projection, I believe, in January, in which they said that without Government intervention a gulf supply interruption could increase the price of oil to $100 a barrel.

Well, cut that in half; let's just say $50 a barrel. Let's say that $100 is exaggerated, $50 Oil means almost doubling of the current price. And we have seen what doubling in oil prices in the past has done to the economy.

So IEA, of course, is necessary. We're talking about another expression of the Western Alliance partnership. And I think what we should be doing now is talking about how to improve IEA; how to fine tune it; how to energize it; how to make it responsive to our national needs, because the IEA is serving our national interests.

We have several suggestions to meet these objectives. First, it would be very desirable for IEA to create a high-level, ministerial level emergency committee to address whatever contingency might occur on the Persian Gulf.

The present emergency structure within IEA is set up more at the bureaucratic level. It doesn't have the prestige. This ministerial group should put an action plan into place and should publicize it to assure IEA signatories, including ourselves, that the structure is capable of moving.

It isn't a matter of sorting out the deck chairs, it's a matter of being prepared to launch the lifeboats, and they should have an action plan ready to do that.

Over the longer term, I think that we ought to take another look at IEA and our obligations to it, and the various commitments within the existing agreement.

There has been some experience since IEA originally was created. Perhaps the 7-percent trigger point to activate oil sharing is no longer appropriate. Perhaps there should be more flexibility built into the system.

We would suggest, Mr. Chairman, that this committee, which has played a leading role in this matter riqht along, might consider calling for a multinational assessment of the IEA structure.

And, finally, we believe that it's very important for the American public to know what IEA is all about, because one of these days, the American public, indeed, might be called upon to make some sacrifices to relinquish some of our oil supply in order to discharge our IEA obligations.

It's very interesting that the IEA Governing Board has been meeting in Paris this past week, but reading the major newspapers in the United States, the Wall Street Journal, the New York Times, the Washington Post, one would not have known about it. There wasn't a single item.

The CHAIRMAN. I would invite—I hate to interrupt you, but because of what you just said, I would invite you to turn and look at the press table.

[No one seated at the press table.]

[Laughter.]

Mr. BERGMAN. That always happens to us, Mr. Chairman, about the time I get on.

To increase awareness of the IEA role, perhaps this committee, having taken the lead in the Government on issues of emergency preparedness, might take a study mission for a 1-week orientation to the International Energy Agency. This study mission could be made up of public officials, State legislators, senators, representatives, and representatives of public organizations.

Now, finally, I'd like to conclude on a note of irony. It's really ironic that we still have to worry about the possible consequences of a supply interruption, an oil supply interruption on the Persian Gulf some 10 years after we were first shocked into an awareness that energy is a pretty key national issue.

I think what that demonstrates to us, or should demonstrate to us, is that we have not completed our energy agenda. We have not achieved energy security, and there's still a long ways to go. We will arrive when we no longer have to worry about the outcome of fighting on the Persian Gulf, and about a cutoff of Persian Gulf oil.

Thank you, Mr. Chairman.

[The prepared statement of Dr. Bergman follows:]

Statement of

Dr. Elihu Bergman
Executive Director

AMERICANS FOR ENERGY INDEPENDENCE
Washington, D.C.

before the

Committee on Energy and Natural Resources
United States Senate
Washington, D.C.

March 30, 1984

Mr. Chairman and Members of the Committee:

On behalf of Americans For Energy Independence (AFEI), I appreciate your timely invitation to testify on U.S. vulnerability to a Persian Gulf supply interruption and U.S. participation in the International Energy Agency (IEA). These are issues of grave domestic and international importance, and we commend you, Mr. Chairman and your fellow Senators on this Committee for continuing to provide a prestigious national platform from which the American public can be informed on their stakes in these matters.

With the Persian Gulf war now reaching new levels of desperation, the prospect and consequences, of an oil supply interruption are imminent dangers. Iraq has resorted to the use of poison gas and Iran threatens to reciprocate in kind. The regular Iranian army is poised to move against Iraq, which, this week for the first time, committed its new French-supplied Super Entendard aircraft equipped with Exocet missile systems. Ironically, the Exocets missed their Iranian targets, and instead hit a Greek tanker sailing out of Kuwait, which is an ally of Iraq. The episode dramatically illustrates the potential for errors and irrationalities that are commonplace in this desperate conflict, and that would be the key factors interrupting oil shipments from the Gulf.

The United States is exposed and vulnerable to a Gulf supply interruption not because we require oil supplies from the region--our consumption of Persian Gulf oil is down to 3% of our total oil usage--but because of an interdependent relationship with allies for whom oil from the Persian Gulf is critical. Japan, for example, is the most exposed of all: Persian Gulf oil constitutes 60% of its oil consumption.

Given these circumstances, Japan and other Gulf-dependent OECD countries would likely respond to a major interruption by seeking oil supplies and reserves wherever possible. This occured in 1979-80, when the Shah's ouster created an interruption of Iranian oil supplies on which the same group of countries were similarly dependent. The action they took in apparent self-defense gave us the second oil price shock of the 70s, which within a year doubled the price of oil. The International Energy Agency projected that this price shock alone drained $1 trillion in economic growth out of the OECD systems.

Speculation about what could happen today yields equally devastating results. One respected source--Wharton Econometric Forecasting of Washington--predicts that in the absence of adequate deterrents coupled to a total reliance on free market mechanisms, a major disruption could drive the price of oil to $100 a barrel, more than triple the current price. Cut this projection in half--to $50 a barrel--and we still would have a 66% increase, which could savage the economies of the OECD countries, now so tentatively embarked on a recovery track.

Nobody knows for certain whether these events will come to pass. But we have learned from the past ten traumatic years of energy transition that the greatest certainty of the world energy scene is uncertainty. Under the circumstances, we should be prepared for the "worst case scenario."

Defense and deterrent against the "worst case scenario" is the purpose of a Strategic Petroleum Reserve and an emergency preparedness system on the U.S. national level, and the International Energy Agency on the Western Alliance level. Now is the time to assure that all are ready for action.

In the balance of this testimony I will offer ideas on how to utilize these resources and institutions more effectively, so they can in fact protect us against the adversities of an oil supply interruption. More immediately, we recommend that the governing body of the International Energy Agency, meeting this week in Paris, set up a high level Emergency Committee to develop and continually update an action plan to deal with Gulf oil supply disruptions. We propose that the Committee should stay in permanent session until the danger is past. The action plan should include specific commitments from member governments of IEA on the sharing and movement of oil supplies and reserves to counter various levels and durations of disruption, plus commitments to observe market and price restraints. The action plan should be widely publicized, and thus provide symbolic as well as substantive assurance to IEA members. The creation of this committee and action plan could authoritatively demonstrate IEA's capability for doing the job it was set up to do. It would also remove the need to panic, should another oil disruption occur.

As you know, we have publicly voiced our reservations about certain aspects of the IEA agreement. Nevertheless, at the outset, we should all be able to vouch for the necessity of an institution like the IEA. This is particularly true given the U.S. Administration's commitment to the marketplace as the exclusive oil allocation mechanism. This approach leaves the government with only two tools to meet emergency situations: the Strategic Petroleum Reserve and the International Energy Agency. The two institutions are deeply interlocked and must be viewed in relationship to each other.

To examine each in isolation, as some have done, is not only to miss their essential linkage, but also inevitably to reach the wrong conclusion the value and potential of each. For example, it is entirely unrealistic to feel comfortable with a Strategic Petroleum Reserve of approximately 400 million barrels even though it may represent 80 or more days' worth of imported oil. This simplistic mathematical calculation misses entirely the point of our obligations under the IEA. Conversely, to run an IEA emergency sharing exercise without recourse to the SPR would be worthless since, in a real emergency, we could not withstand, nor would we wish to, the international pressures to open the SPR spigot for the benefit of our Western Allies.

We are not alone in this opinion. Frank Zarb and James Schlesinger, speaking in this room at a recent AFEI conference commemorating the tenth anniversary of the Arab oil embargo, both cited the SPR as one of the most important U.S. energy achievements in the past decade. It is also noteworthy that both former energy czars, when asked if they had anything to say in the way of "confessions," expressed regret that their respective Administrations had not pushed harder to implement and strengthen the reserve program. Mr. Zarb, reflecting on the fiscal frugality which inhibited the fill rate, pointed out that "had we filled the salt domes at the rate initially proposed, we'd be about $15-20 billion ahead of ourselves in actual investment in the ground." Mr. Schlesinger suggested that instead of arguing whether the SPR should be 500 or 700 million barrels, "we should head for an SPR of several billion barrels. We should use the same standard that we used for other strategic materials, which is that we should be able to stand a cutoff of foreign supply for a period of two years during times of war."

Indeed, one of the more important and useful lessons we have learned in the 10 years since the Arab oil embargo is the interdependence of the energy systems of the United States and our major industrial allies. So long as oil remains the Achilles heel in our collective energy system, we remain vulnerable to our Allies' weaknesses as well as our own.

That lesson was brought home with devastating impact when the Iranian revolution triggered the second oil price shock of the decade in 1979-80. We could have lived with cutoff of Iranian oil. But Western Europe and Japan, even with consumption declining, could not tolerate the sudden curtailment of Iranian supplies. Although their immediate position was secure, the future appeared uncertain. So they rushed into the marketplace to protect themselves, and in so doing bid up the price of oil to a level that enabled OPEC to ratify a doubling of oil prices within the year.

The United States did not need the oil; nor were we a party to the panic buying. But we suffered from the consequences of their behavior, which was a major factor in the economic tailspin from which we now are recovering. We face the prospect of a repeat performance, in which the United States, even less reliant on Persian Gulf oil at the moment, is again jeopardized by the requirements of our allies.

It would be unfair and analytically dangerous if we were to examine the IEA and its admitted deficiencies and reach the conclusion that it served no purpose, or, worse, that it was inimicable to U.S. interest, without at the same time considering the alternatives. For that, we must review the current oil dependency of the United States and our allies.

To be sure, our own dependence on Middle East oil has changed dramatically in the last few years. Oil transiting the Strait of Hormuz and destined for the United States has decreased from more than 1.8 million barrels per day in 1979 to 500 thousand barrels per day by 1983. U.S. oil requirements from the Persian Gulf have declined from 10% to 3%.

On the other hand, many of our allies remain heavily dependent on this source. Japan, for example, receives 60% of its oil from the Persian Gulf; Italy, 42%; France 33%; and West Germany 23%. In case of an oil disruption, these nations would face unacceptable choices if the IEA and the SPR were not available.

In an emergency, every country would face a reduction of its available domestic oil supply. For the U.S., the Congressional Budget Office estimated that if oil imports were reduced by 25%, inflation would rise by 25%, that there would be an increase of over 2% in unemployment; and a 7.5% decline in the GNP. From this analysis, one can extrapolate the consequences of a sharp decrease in oil availability on some of our Western Allies, who are far more dependent on oil. These governments simply could not deprive their populations of a basic level of oil imports without risking a collapse of their economies.

Unable to contemplate a sharp decrease in oil consumption and supplies from traditional sources, our allies face even more perilous choices. First, and perhaps in the short-term most attractive, would be to place greater reliance on imports from the Soviet Union. But increased Western European reliance on Soviet energy supplies could add a new and disturbing dimension to our interdependent relationship.

Soviet oil exports to Western Europe increased by more than 25% in 1982 and 1983. As a result, there is increasing concern about whether European dependency on Russian oil does not already exceed the prudent limits of Western security. From a security perspective, Soviet sources are no better than Persian Gulf sources. Shifting reliance from the Gulf to Siberia may, in fact, decrease our Allies' security, or at least make Western reliance on Soviet oil very expensive, both in financial and in political terms. Greater reliance on Soviet supplies does not appear to us to be a desirable alternative for the Western alliance.

Another alternative, of course, exists: This would involve military occupation of oil fields in the Gulf region. The United States has indicated its willingness to prepare for this course by developing a Rapid Deployment Force at an estimated cost of $80 billion. This recourse clearly would be a choice of last resort, and attempted with a full understanding of the great costs and the uncertainty of success.

The existing condition of Western alliance vulnerability to an oil supply interruption, and the limited, and in some cases undesirable choices to deal with it, underlines the need for a collective structure such as IEA. Perhaps IEA is not the ideal arrangement, but it is the only one we have. Now is the time to improve it, fine tune it, and increase IEA's capability to serve our interests.

As an immediate priority, we have proposed an IEA Emergency Committee to address the current threat of a Persian Gulf supply interruption. Concurrently the U.S. should initiate some longer term revisions in the IEA structure based on experience, changes in the energy circumstances of member countries, and the changed nature of oil dependence among the Western Allies since the agreement was signed. Some of the members of the IEA could manage without undue damage an oil disruption in a specific area such as the Middle East. On the other hand, some could not handle such a cut-off. They would require the assistance of other members. Since an IEA-like agreement supported by a large SPR seems to be the only practical defense against such a contingency, all members of the Alliance should seek a fair, equitable and workable arrangement within the existing IEA structure.

Sufficient time and circumstances have passed since the signing of the present agreement to warrant a full review which would give weight to the steps taken by some IEA members to reduce their vulnerability to oil embargoes from certain unstable areas. We must recognize that the U.S. is both the largest oil consumer of the Alliance as well as its largest energy producer. Both facts may well place special responsibilities on our shoulders. Nevertheless, it would only be just for the rest of the Alliance to recognize the great progress we have made towards energy independence and to acknowledge our changed circumstances in a new agreement. The new agreement must, in addition, provide further incentives to those who still rely heavily on imported oil so that they reduce their dependence by diversification of supplies and greater conservation efforts.

We would also recommend that the Administration review the efficacy of the arbitrary shortage level which today triggers the IEA emergency sharing mechanism. It seems to us that with some national oil reserves well established, and with requirements varying so greatly from country to country, it may no longer be necessary to establish rigid pre-determined benchmarks. Since the crisis will undoubtedly vary from anything the experts now anticipate, it may be preferable to establish clear guidelines that leave the details to be worked out once the nature of the emergency becomes clearer. Fortunately, our petroleum reserves now give us the breathing room to do this, and we should be able to implement actions targetted to meet most emergencies. This was not the case when IEA and the strategic petroleum reserves were first created.

Finally, Mr. Chairman, we are deeply concerned that the American public knows little about the IEA and its significance to our economy and national security. We have encouraged the Administration to increase the supply of information about the IEA and its role in emergency situations. True, the agreement is highly technical and perhaps only a handful of people in this world fully understand its requirements and operations, but this is no justification for not providing the American public the relevant basic information--again and again--if necesary. This is why we believe the role of this Committee and these hearings are so important. Without these discussions, we can easily foresee the day when the IEA arrangements must be called into action, requiring certain sacrifices by the American public, but with the public caught unaware of why. It is in everyone's best interest to publicly discuss the IEA and the international agreement.

For the long term, we must redouble our efforts to reduce excessive oil consumption through displacement and conservation, thereby diminishing the value of imported oil, the strategic importance of unreliable oil sources and its pressures on the Alliance. With respect to our energy security, AFEI believes that a large Strategic Petroleum Reserve and U.S. participation in an effective IEA, with more equitable and realistic burden-sharing arrangements than those which presently exist, are the two buffers against a sudden oil cutoff. Indeed, as our analysis indicates, the Strategic Petroleum Reserve and the IEA are the only institutions that might see this country and its Allies through an emergency. We should invigorate both and insure that the American public understands and supports them.

The CHAIRMAN. Thank you, Dr. Bergman.

Last, but certainly not least, Mr. Van Arsdall.

STATEMENT OF R. THOMAS VAN ARSDALL, VICE PRESIDENT, AGRICULTURAL INPUTS AND SERVICES, NATIONAL COUNCIL OF FARMER COOPERATIVES

Mr. VAN ARSDALL. Thank you, Mr. Chairman, Senator Evans.

The national council regards continued participation by the United States in international energy programs as a necessary ingredient to a successful and comprehensive emergency preparedness policy.

There are some who believe that we can go it alone, and that our participation only benefits others. However, this Nation is not an island which can be insulated from events elsewhere, as our consuming allies remain heavily dependent upon foreign oil sources, as has been well documented.

The United States could sucessully offset domestic shortages and yet face huge increases in its energy costs. Now, the triggering of oil-sharing plans, in all likelihood, means that the United States would be called to share some of its oil with others during an emergency—although I suspect somewhat discretely.

But U.S. interests would be well served by minimizing disruption-driven oil price increases and helping to ensure more stable economies for its allies.

Now, we think that U.S. participation in the IEA should include a top priority commitment to two things; assuring that all consuming allies truly maintain full and effective strategic reserves; and, accomplishing a common emergency response policy of early drawdown of strategic reserves.

Now, it's conceivable that the United States might act responsibly in initiating drawdown of the SPR early in a disruption while other nations defer such action. I suppose also that IEA partners request the triggering of crude sharing without first attempting drawdown of their own strategic reserves.

One can easily imagine the outrage of American consumers under such circumstances.

Perhaps the United States should consider tying its commitment to share crude oil with others in the IEA through a requirement that early drawdown and other responsible self-help steps be undertaken first.

Concerning two related issues; first, the national council supports carefully limited antitrust exemptions for multinational oil companies, but only to the extent necessary to help balance out shortages internationally. We would strongly object to any extension of antitrust releases which would permit the abrogation of contracts for crude oil and/or petroleum products within the United States.

Second, the volatile fair-sharing issue must be effectively addressed, we think, before oil companies will participate in IEA crude-sharing.

The National Council would vigorously oppose any approach that might require the diversion of crude-oil supplies from crude-deficient cooperative and independent refiners to multinational oil companies for that purpose.

To be an effective participant in the international arena, we think that the U.S. must first set a lead example by acting decisively to get its own SPR house in order.

In this regard, the National Council is pleased by this committee's recent rejection of the administration's proposed lower fill rate of the SPR by acting to recommend that the fill be funded at 186 thousand barrels per day.

Additionally, it is our understanding that the committee intends to mark-up emergency preparedness legislation shortly.

As part of that process, the National Council endorses your favorable consideration of the concepts embodied in S. 2484, recently introduced by Senators Durenberger, Andrews, and other Farm Belt Senators.

This bill corrects serious flaws in existing plans by increasing the flexibility for early drawdown, and modifying SPR distribution procedures to minimize uncertainty, panic, speculation and hoarding.

In conclusion, this Nation's emergency preparedness policies on both the domestic and international fronts must be made whole if national and economic security objectives are to be met in the face of the real threat of future disruptions.

We appreciate this opportunity to share our views.

[The prepared statement of Mr. Van Arsdall follows:]

Statement of
R. Thomas Van Arsdall
Vice President, Agricultural Inputs and Services
National Council of Farmer Cooperatives

Mr. Chairman and Members of the Committee, my name is R. Thomas Van Arsdall, and I am vice president of agricultural inputs and services with the National Council of Farmer Cooperatives. The National Council is pleased to have the opportunity to appear and testify before this Committee on U.S. participation in international energy programs.

INTEREST OF THE NATIONAL COUNCIL

The National Council is an association of cooperative businesses which are owned and controlled by farmers. Our membership includes 107 major marketing and farm supply cooperatives, the 37 banks of the cooperative Farm Credit System, and 32 state councils of farmer cooperatives. The National Council represents about 90 percent of the 6,100 local farmer cooperatives in the nation, with a combined membership of nearly two million farmers.

Among the farmer cooperatives the National Council represents are supply cooperatives which own and operate five efficient refineries possessing an aggregate production capacity of 301,000 barrels per day, and whose yields of gasoline, diesel fuel and heating oil amount to approximately 85 to 90 percent of their refined products. Farmer cooperatives market petroleum products in more than 40 states and currently supply about 45 percent of all on-farm fuel and a large portion of rural needs.

The cooperative petroleum system represents the only segment of the oil industry in which the consumers of its products are also its owners. This feature carries with it a unique accountability in terms of commitment of supply, service and price.

Agriculture is critically dependent upon sufficient fuel supplies on a timely basis. Any interruption of even short duration can result in loss of agricultural production for an entire year, with serious adverse impacts on consumer food prices. Agriculture is at the end of the petroleum distribution system, and is likely to be hit first and hardest by any future disruption. Additionally, even a "minor" disruption as measured in physical barrels can quickly cause serious regional shortages and sharp price increases. These developments in turn generate devastating macro-economic impacts, which endure long after memories of gasoline lines fade into the past. Farmers suffer from the dual effects of higher fuel costs and a depressed economy in which to market their goods.

SUMMARY OF STATEMENT

The National Council endorses U.S. participation in international energy programs as being consistent with national and economic security objectives. We recommend that such participation be carefully structured to (1) encourage aggressive fill of all strategic oil reserves; (2) accomplish a common policy of early drawdown; and (3) minimize distortions in the domestic petroleum market. The U.S. should also set a lead example for other IEA members by accomplishing critically needed improvements in its own SPR drawdown policy, including (1) an early drawdown response policy; and (2) distribution procedures which minimize uncertainty, panic, speculation and hoarding.

I. VULNERABILITY TO DISRUPTION REMAINS

World instabilities, particularly in oil producing regions, speak eloquently of the serious threat of future oil disruptions. The Secretary of Energy has recently indicated that one or more disruptions of varying magnitude over the next several years are not only possible, but indeed probable. We cannot allow the present surplus in world oil production capacity to lull us into a false sense of security. Consider the following:

- Increasing World Demand -- World-wide economic recovery is generating an increased appetite for oil.
- U.S. Oil Imports Increasing -- While U.S. imports are at least temporarily down from the high of 46% of consumption in 1977, they still represent 1/3 of our needs. U.S. imports are now increasing.
- Private Inventory Myth -- Recent events have clearly illustrated that emergency inventories in the private sector are basically nonexistent. Indeed, inventory behavior typically runs counter to emergency preparedness objectives.
- World Dependence on OPEC -- Although Arab OPEC producers presently provide about 5% of U.S. needs, our allies remain heavily dependent. One-fifth of the total oil consumed by the non-OPEC free world flows through the Straits of Hormuz.
- Surplus Crude Oil Lies in Persian Gulf -- Seventy percent of the world's present surplus production capacity lies in the Persian Gulf. There is no assurance that any of this capacity would be utilized to offset a disruption.

II. SPR: CORNERSTONE OF U.S. EMERGENCY PREPAREDNESS

FILL SPR AGGRESSIVELY:

For the first time in this nation's history, we have the ability to respond to an oil crisis by offsetting shortages, rather than suffering them. The SPR now holds 385 million barrels in storage. The Congress and the Administration are to be commended for having worked together to achieve this positive result.

Even at current levels, the SPR has sufficient volumes to offset all but the most severe of shortages, including those that we have experienced in the past. The United States now has the opportunity to rob foreign oil producers of their powerful oil weapon--control of the incremental barrel. As the SPR moves toward the next goal of 750 million barrels, the flexibility to use this national insurance policy in dealing with oil emergencies will expand dramatically.

The National Council has consistently supported aggressive buildup of the SPR, with suitable qualities of crude oil. We highly endorse Sec. 4(a) of EEPA, which represents a delicate compromise painstakingly reached between Congress and the Administration.

The Administration earlier this year requested FY '85 funds sufficient for a fill rate of only 145,000 barrels per day. The National Council is pleased by this Committee's recent rejection of the lower fill rate, by acting to recommend that funding be provided at a level to permit a fill rate of 186,000 barrels per day. Given the massive adverse impacts which can be generated by an oil disruption, there can be no better investment than a national SPR insurance policy.

IMPROVEMENTS IN SPR DRAWDOWN POLICY CRITICAL:

This nation must act decisively to get its SPR house in order, even as the merits of U.S. participation in international energy programs are being considered. When a disruption threatens to spawn shortages and sharp price increases, this nation's effectiveness in responding hinges upon one thing: The Administration's ability to augment the marketplace to the extent necessary by offsetting shortages and calming market behavior through timely use of SPR crude oil.

The National Council regards the present drawdown plan and philosophy of use as seriously flawed, sharply inhibiting the potential effectiveness of the SPR. Enclosure 1 offers recommended improvements, focusing on two objectives:

- Early drawdown; and
- SPR distribution procedures which minimize uncertainty, panic behavior, speculation and hoarding.

Senators Durenberger and Andrews, et al, recently focused on similar concerns by introducing S. 2484, the Energy Emergency Preparedness Act of 1984. The National Council strongly endorses this bill.

We would call your attention in particular to Sections 3 and 4. Section 3 limits the universe of eligible SPR purchasers to U.S. refiners. It also appropriately recognizes the differential access of small and independent refiners to crude oil, in the event that an auction process is used. Section 4 increases the flexibility for early drawdown by permitting limited use of SPR oil during a disruption at a lower threshold--without creating a panic by having to declare a severe emergency exists before taking any action. Even limited early drawdown of the SPR, if accompanied by similar action in other consuming nations, can inject sufficient volumes of crude oil into the market to deal with the adverse effects of most incremental barrel disruptions.

It is our understanding that this Committee intends to mark up emergency preparedness legislation shortly. The National Council urges your favorable consideration of the concepts embodied in S. 2484.

III. INTERNATIONAL ENERGY PROGRAMS

U.S. PARTICIPATION ESSENTIAL:

The National Council regards continued participation by the U.S. in international energy programs as a necessary ingredient to a successful and comprehensive emergency preparedness policy.

The United States apparently has reached a critical crossroads in the process of determining its relationship to other consuming nations in the energy emergency preparedness arena. There are some who believe that we can "go it alone," and that our participation only benefits others. For example, a number of U.S. oil industry leaders reportedly are questioning the need for continued U.S. participation in international energy programs, pointing to the "new reality" of a persistent world oil glut.

Events in last summer's AST-4 Test left other IEA participants in serious doubt concerning the commitment of the U.S. to this emergency preparedness structure. Their fears were increased when the IEA antitrust authorities expired, after the Administration promised to veto an extension containing a Senate amendment requiring that a standby allocation plan be developed.

On the face of it, this apparent erosion in the commitment to international energy programs might appear to carry minimal risk. After all, with nearly 400 million barrels in the SPR, we are in a position to offset a total cutoff of imports for more than 90 days. And certainly physical shortages in the U.S., which would result from the incremental barrel disruptions that are most likely to occur in the future, can be offset through timely use of the SPR.

However, the National Council believes that this is a dangerously shortsighted view of disruption dynamics. This nation is not an island which can be insulated from events elsewhere. Our consuming allies remain heavily dependent upon foreign oil sources, particularly those in the volatile Middle East.

It is inconceivable that we would stand by idly while the economies of our allies are devastated. Additionally, it is clearly the incremental barrel which ultimately controls the destiny of oil prices during a disruption. Those nations most desperate for oil supplies are likely to bid the highest prices, with all oil prices following. Thus, the U.S. could successfully offset domestic shortages and yet face huge increases in its energy costs.

Under the current IEA structure, oil-sharing plans call for member nations to share stocks when the shortage in total supplies, or for any one member, exceeds seven percent. Given the relatively higher dependence of other member nations on oil imports, in all likelihood this means that the U.S. would be called upon to share some of its oil with others during an emergency. While this initially might seem to be counterproductive, the best interests of the U.S. would be served in two ways, by (1) minimizing disruption-driven oil price increases, and (2) helping to assure more stable economies for its allies.

This nation simply cannot ignore the rest of the world if such dangerous price increases are to be minimized. IEA members are unavoidably bound together in the need for consistent and responsible emergency preparedness policies.

PURSUE COMMON IEA POLICIES ON FULL STRATEGIC RESERVES AND EARLY DRAWDOWN:

The U.S. role in the IEA should include a top priority commitment to the accomplishment of two primary objectives within the structure of the IEA emergency preparedness programs:

- Assure that strategic reserves of consuming allies exceed 90 days' imports, and that they are true emergency reserves and not the result of "paper games." There are persistent rumors that emergency stocks held in private hands in West Germany, for example, do not really exist.
- Accomplish a common policy of early drawdown of strategic reserves in response to future oil disruptions.

It is conceivable that the U.S. might act responsibly in initiating drawdown of the SPR early in a disruption, while other nations defer such action. This means that the U.S. could be attempting to act as the sole buffer against oil price panic--an attempt which would most likely end in failure. Even if successful, the world economy would benefit at the American taxpayer's expense. Failure would mean that all consuming nations would be facing sharply higher oil prices.

Suppose also that IEA partners request the triggering of crude-sharing, without first attempting drawdown of their own strategic reserves. American consumers undoubtedly would be outraged if our oil were moved elsewhere under such circumstances. The U.S. essentially would be asked to divert its oil supplies during a disruption to nations which have not implemented drawdown of their strategic reserves.

Perhaps the U.S. should consider tying its commitment to share crude oil with others in the IEA to a requirement that responsible self-help steps be undertaken first, including the early drawdown of their strategic reserves.

MEASURE SEVERITY OF A DISRUPTION BY ITS IMPACT:

The National Council believes that it would be a serious error to attempt to utilize the seven-percent physical shortfall criterion as a trigger for drawdown of strategic reserves. It is inflexible and may preclude dealing with those smaller disruptions which are capable of generating huge price increases. The Iranian disruption in 1979 is a case in point. The economic damage which could result from an oil crisis should be a major consideration in the decision to draw down strategic reserves.

ANTITRUST EXEMPTIONS/FAIR SHARING:

Two other issues directly related to the effectiveness of U.S. participation in international emergency preparedness programs have engendered considerable debate in the U.S. political arena: Antiturst exemptions and the concept of "fair sharing."

Antitrust

The National Council supports carefully limited antitrust exemptions for multi-national oil companies--but only to the extent necessary to facilitate the movement of oil to the areas of greatest need in order to balance out shortfalls. There is no escaping the reality that such companies have the information network and the logistics capabilities to act somewhat in concert for the benefit of the U.S. and world economy during an oil emergency.

However, the National Council must strongly object to any extension of antitrust releases which would permit the abrogation of contracts for crude oil and/or petroleum products within the U.S. Regional shortages and price panic would be exacerbated, particularly in rural areas, as cooperative and independent refining and distribution operations would undoubtedly bear the brunt of such losses.

"Fair Sharing":

Until the volatile fair-sharing issue is effectively addressed, oil companies will be extremely reluctant participants, if at all, in crude sharing during an emergency which may threaten their own supplies. Communications during the AST-4 Test serve to reinforce this conclusion.

Enclosure 2 is a May 11, 1983 communication from the National Council to DOE Assistant Secretary William A. Vaughan. The National Council indicated that farmer cooperatives would be unable to offer even the first barrel of petroleum for sale to foreign buyers during a disruption, in light of the critical needs of agriculture. Enclosure 3 is a communication to Mr. Vaughan on the same subject from Texas City Refining, a farmer-owned refiner.

The Administration has attempted to show that voluntary participation by oil companies will be sufficient to meet commitments under the IEA. Until the issue of fair sharing is satisfactorily resolved, we do not see that policy as feasible.

The National Council urges this Committee to explore in depth the fair-sharing concept, including any possible role of the SPR in satisfying this need. In particular, the National Council would vigorously oppose any approach that might require the diversion of scarce crude oil supplies from crude-deficient cooperative and independent refiners to multi-national oil companies--at a time when independent refiners are likely to be experiencing a disproportionate loss of crude oil supplies. Such a policy would seriously jeopardize the continuity of critical fuel supplies to U.S. agriculture.

IV. CONCLUSION

The National Council has focused its comments upon international energy programs specifically as they relate to emergency preparedness. We believe that the U.S. has no choice other than to act in its own best interests by participating actively and seriously in such international energy programs. As outgoing IEA head Ulf Lantzke recently stated, "Governments cannot abdicate their responsibility for preserving a smoothly functioning economy--and that is precisely what is at stake in an oil disruption." (Oil Daily, February 27, 1984)

In reiterating our basic points, the National Council believes that IEA participation by the U.S. should incorporate two objectives: (1) maintenance of healthy and effective strategic reserves by all IEA participants; and (2) the accomplishment of a common philosophy of early drawdown in response to a disruption--whose severity is measured by potential adverse impacts, and not merely by physical shortfalls. We also concur with the need for a carefully crafted antitrust exemption, which would allow multi-national oil companies to perform a valuable role in the world marketplace, without generating new and damaging distortions in the domestic marketplace.

The National Council is pleased to have had this opportunity to testify. I will remain available for any questions.

ENCLOSURE 1 TO
3/30/84 TESTIMONY

FUNDAMENTALS OF RESPONSIBLE SPR DRAWDOWN POLICY

I. SPR: CORNERSTONE OF ENERGY EMERGENCY PREPAREDNESS

Emergency Preparedness Objectives:

In the consideration of Strategic Petroleum Reserve (SPR) policy and related emergency preparedness alternatives, the National Council believes every reasonable effort must be dedicated to meeting two overriding objectives:

- Minimize and eliminate where possible the *adverse effects of regional and national shortages.*
- Minimize severe damage to the national economy by mitigating the ratchet effect of *permanent, disruption-driven energy price increases.*

SPR Can Offset Shortages:

Even at current levels, the SPR has sufficient volumes to offset all but the most severe of shortages, including those that we have experienced in the past. The United States now has the opportunity to *rob foreign oil producers of their powerful oil weapon--control of the incremental barrel.*

When shortages and sharp, disruption-driven price increases threaten, this nation's effectiveness in responding hinges upon one thing: the Administration's ability to *augment the marketplace* to the extent necessary by *offsetting shortages* through the injection of sufficient quantities of SPR crude oil into the marketplace in a timely and effective manner. The SPR must be utilized in a way which *reduces uncertainty and panic* and *keeps people out of a volatile spot market.* This is by far the least intrusive and most productive response mechanism available.

No politically motivated disruption in a world market that is far from perfect should be *permitted to determine this nation's long-term energy pricing structure*, as has been the case over the past decade. The *penalties* exacted upon our economy by such dramatic *price surges unrelated to the commodity's value* are simply *far too severe.*

II. RECOMMENDED CHANGES TO SPR DRAWDOWN POLICY

Early Drawdown of Sufficient Quantities:

It is a serious policy error to attempt to measure the seriousness of a disruption policy solely in terms of the net world-wide shortfall in physical barrels. The behavioral response and macro-economic impacts of a disruption represent more overriding considerations in the decision to utilize the SPR. For example, the net disruption caused by the Iranian Revolution was relatively small as measured in physical barrels. Yet this political accident caused prices to rise 160% in an 18-month period, with prices remaining artificially high in spite of a three-year oil glut.

In the National Council's view, the consequences of the oil disruption caused by the Iranian Revolution were certainly major. A repeat of those events would warrant early drawdown.

The National Council recommends that a commitment to early drawdown of the SPR be made through the following changes in existing policy:

- **Timely and efficient utilization of *sufficient quantities* of SPR crude oil should be established as a response mechanism, *early* in the disruption.**
- *Spot market prices*, during a disruption, should be used as *early warning system* in the decision to initiate SPR drawdown.
- *Increased cooperation with other consuming nations*, as in the IEA, should be sought in the *early drawdown* of strategic reserves.

Flexibility Through Sequential Management:

Under present law, the President must declare an energy emergency before utilizing the SPR. Such an announcement can itself trigger panic behavior and a potentially disastrous build-up of private inventories at the worst possible time. The National Council would propose that the Congress give the President discretionary authority to take two specific steps *prior to having to declare an emergency:*

- *Divert SPR Fill.* Permit the President to stop filling the SPR, and redirect the oil contracted for the SPR into the domestic marketplace in the early stages of a disruption.
- *Limited Drawdown.* Give the President the authority for a limited SPR drawdown—for example, 300,000 barrels per day for up to 90 days—early in a disruption.

U.S. Refiners Eligible to Purchase SPR Oil:

The current distribution plan, based on an unrestricted auction of SPR oil to all financially qualified bidders, insures that the oil purchased with *public funds* will generate speculative profits. The National Council recommends the following:

- *Distribution* of SPR crude oil of suitable quality should be made only to U.S. *domestic refineries* in operation at the time of the disruption.

Efficient SPR Distribution:

The National Council believes strongly that the most efficient means of distributing SPR oil consistent with national objectives is as follows:

- All SPR oil should be sold at a *predetermined market price*, with appropriate adjustments for crude quality. The price should be *reflective of the total market*, and not panic conditions embodied in incremental oil prices during the crisis.

- Price levels and distribution procedures should be consistent with the national objectives as stated in EEPA and EPCA.

- *Hoarding* or resale of SPR oil should be *prohibited*. Purchasers of SPR oil should be required to refine crude oil and inject refined products into the marketplace in a timely manner. Exchanges should be permitted, to the extent necessary to facilitate logistics of moving crude oil.

Auction Modifications:

However, if the Administration persists in pursuing an auction approach, the National Council would like to suggest some additional parameters which, if carefully applied to the auction process, significantly increase the likelihood that it will operate in a manner more consistent with national objectives:

- Limit individual oil purchases *to reflect a refiner's needs*, as measured by some index such as recent crude oil operating levels.

- Oil released for sale will be distributed in two pools:

  -- all bona fide U.S. refiners in sealed bid auction, with a

  -- set-aside volume sold at prices derived in the auction process for minimum needs of small and independent refiners.

The auction process would determine the price for the SPR oil sold. In the first pool, the price for an individual refiner's purchase would be set by its successful bid. In the second pool, the price would be a function of a composite of the successful bids in the first pool. There is ample precadent for this approach in existing, on-going programs.

National Council of Farmer Cooperatives
1800 MASSACHUSETTS AVENUE, N.W. • WASHINGTON, D.C. 20036 • TELEPHONE (202) 659-1525

ENCLOSURE 2 TO
3/30/84 TESTIMONY

May 11, 1983

Mr. William A. Vaughan
Assistant Secretary
Environmental Protection, Safety,
  and Emergency Preparedness
Department of Energy
4G-084, Forrestal Building
1000 Independence Avenue, S.W.
Washington, D.C. 20585

Dear Mr. Vaughan:

The National Council of Farmer Cooperatives, and its member petroleum cooperatives, appreciate your invitation to participate in the Fourth Allocation System Test (AST-4). You specifically requested our assistance in simulating "voluntary offers" to sell crude oil or petroleum product overseas. Farmer cooperatives and U.S. agriculture have a vital stake in the effective implementation of emergency preparedness policies, both domestically and abroad.

We must advise you that no farmer cooperative would be able to offer even the first barrel of crude oil or petroleum product for sale to foreign buyers during a disruption.

The farmer cooperative petroleum system is unique in the oil industry, in that its customers are also its owners. Farmers invested in this system to help assure uninterrupted fuel supplies at equitable prices for critical operations. Our member-owners would not condone shifting any petroleum to foreign markets, regardless of the price. Additionally, farmer cooperatives as independent refiners have direct control over relatively insignificant amounts of foreign crude oil. Thus, there would be little or no flexibility to divert oil from foreign sources bound for cooperative refiners. Certainly, there would be no possibility of moving domestic crude or refined product overseas.

The cooperatives' commitment to the farm system was evident in a similar instance, when a world-wide fertilizer shortage existed in 1974-75. Fertilizer prices exceeded $400 per ton, and many companies elected to sell volumes to more lucrative markets overseas—exacerbating domestic shortages. However, farmer cooperatives retained all available product for consumption domestically.

We will be following the progress of AST-4, and other exercises related to testing the International Energy Program capabilities. As the DOE becomes more involved in testing drawdown capabilities of the Strategic Petroleum Reserve (SPR), we would hope that the farmer cooperative system is permitted to participate. Our involvement could add significantly to an improved understanding for all concerned of the potential strengths and deficiencies of drawdown policy.

We look forward to discussing such a possibility with you and your staff in the near future.

Sincerely,

R. Thomas Van Arsdall

R. Thomas Van Arsdall
Vice President, Member Services
and Energy

RTVA:sn

TEXAS CITY REFINING, INC.
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June 6, 1983

ENCLOSURE 3 TO
3/30/84 TESTIMONY

The Honorable William A. Vaughan
Assistant Secretary
Environmental Protection, Safety and
Emergency Preparedness
Department of Energy
Forrestal Building
1000 Independence Avenue, S.W.
Washington, D.C. 20585

Dear Mr. Secretary:

This will acknowledge receipts of your letters of April 26, May 2 and May 6, 1983 soliciting the assistance of Texas City Refining, Inc. during the Fourth Allocation System Test (AST-4) of the International Energy Agency.

From reading the three letters a certain preconceived purpose seems paramount in your request for assistance. That purpose seems to be to demonstrate "that mandatory and intrusive Government regulatory programs are not needed to respond to energy emergency situations and that cooperative and voluntary programs" and the Reagan Administration's market-based energy program are adequate to the task - whatever it might be.

We at TCR cannot support such a loose and perilous course. Your approach to emergency preparedness is tantamount to no preparedness at all.

Furthermore, we find it to be incongruous that in an allocation test your prime objective is to demonstrate that allocation is not necessary. Under the IEA agreement the United States has accepted a potential obligation to allocate crude oil supplies to foreign nations. It is only logical that these supplies will come from the supplies of U.S. refining companies and that a concomitant need will arise to reallocate reduced supplies among these and other U.S. refining companies.

The AST-4 scenario calls for the supply interruption to primarily impact the months of April, May and June. These are critical months in agriculture, time for plowing and sowing. TCR is owned by two farmer cooperatives, namely Agway, Inc. and Southern States Cooperative, Inc. TCR would be foolish to voluntarily offer for sale products required for the production of U.S. food supplies in such a time of energy uncertainty and national peril.

Therefore, TCR could offer no product for sale outside the United States. Beyond this reply, TCR can offer no further assistance.

Sincerely,

M. E. Houser
President

MEH:jhk

The CHAIRMAN. Thank you very much, Mr. Van Arsdall.

Even though the participation by members of the committee, as well as the interest expressed by the press, has dropped off, I think, due primarily to the interruptions and the uncertainties of our schedules, I think it's useful for Senator Evans and myself directly, and for the record, more indirectly, to ask a few questions. And I have a few.

One question that I would like to ask of, perhaps the last witness, Mr. Van Arsdall. I'm troubled by—and I understand, but I'm troubled by the concern that is expressed, an understandable concern, that whatever fair-sharing agreement we have not divert supplies away from a specific sector.

You are a spokesman for a specific sector of the economy, so your concern is understandable, and I don't question it at all.

The question that I have, and perhaps it's unfair to focus on you because you made the statement, is that domestic fair-sharing will have some priorities in it; international fair-sharing will have some priorities in it; domestic fair-sharing may interrupt some contractual arrangements; international fair-sharing would perhaps invade contractual agreements.

Is there any possibility that in times of shortage we can guarantee any one individual sector that its supplies contracted for will be respected, while other people's supplies are not?

Mr. VAN ARSDALL. Well, I think that's a fair question to a very difficult situation. I might address that by making several comments.

No. 1. If strategic reserves are used effectively, both here and internationally, we're prepared to handle most of the incremental barrel disruptions that are likely to occur, including those that we have seen over the last decade.

Then the issue becomes less relevant if you use the SPR, for example, here to offset some of the fair-sharing we might be doing internationally, which I presume would be by diversion of tankers rather than by shipping it off of our own docks.

If it qets beyond that——

Senator METZENBAUM. And it's that scenario that——

Mr. VAN ARSDALL [continuing]. Which I hope we never get to, because there won't be any good solutions.

Our statement reflects the fact that the cooperative petroleum community is owned by farmers. The cooperative petroleum community is largely deficient and depending upon third-party contracts which all have force majeure clauses in them, and will almost certainly be abrogated for other reasons.

So we're looking at losing a disproportionate share of our crude oil supplies perhaps in the middle of spring planting. At the same time, someone may use these vehicles as another reason to abrogate more crude oil contracts.

The CHAIRMAN. But you used the term disproportionate share. Do you have the same objection if you lose a proportionate share?

Mr. VAN ARSDALL. Well, I think this country has a policy decision to make in terms of whether sufficient fuel supplies get to U.S. agriculture. And if you look at the role of——

The CHAIRMAN. That comes down to another question, not of proportionate sharing, but of national priority setting.

Mr. **Van Arsdall.** I think that's exactly what you're talking about. It doesn't matter what kind of a refinery it is, it depends upon what type of in-use customers it provides the products to, because I don't see why anybody would care about a refinery in and of itself unless they happen to be shareholders.

The **Chairman.** And they are concerned, and they have expressed that concern, and that's a legitimate one, too.

But we have gone through that several times before, and the list of priorities pretty soon exceeds available supply, which implies a 100-percent cutoff for those who don't have a 100-percent supply. supply.

Every question brings up a more serious and more difficult set of subquestions. And I don't have an answer for all of that, except to expose it to view.

And that brings me to a question that I wanted to ask Dr. Bergman.

You suggest that it's essential for us to continue to be involved in IEA. Senator Metzenbaum and Dr. Singer have expressed the view that it's ridiculous to assume that the American public would permit us to be involved in such an international sharing program. Mr. Van Arsdall has pointed to one specfic area of problems with respect to international sharing.

Would great public view, participation and understanding engender greater acceptance of the IEA Program, or would it simply stimulate more desire to stay away from it?

Dr. **Bergman.** Well I think, Mr. Chairman, it would engender greater acceptance. I share a confidence in the good judgment of the American people once they're informed about their stakes on a particular issue.

I think, as I indicated before, the IEA has been very much like a brooding omni presence in the sky; we don't know too much about it. It's even difficult in this town to find out how these sharing agreements might work.

And there's one more thing that would support our continued affiliation with the IEA, and that is this: if the IEA agreements work effectively there may never need be the need for sharing shortages. I mean it this way: If the IEA signatories have confidence in one another; if they feel genuinely that they will be helped by one another; there will perhaps be an atmosphere of confidence as contrasted to the atmosphere of anxiety and panic which took hold in both 1974 domestically, and 1979–80 on the international scene in the international market and which stimulated two very damaging price hikes.

So I think it's very much a matter of atmospherics, of knowledge, of information.

The **Chairman.** Well, you make an excellent point in your statement, Dr. Bergman, when you point out the effects of the uncertainties in the market during 1978, and 1979, and 1980, when we didn't experience the same degree of shortage, nor the threat to supplies as others did, and we didn't, in this country, participate to the same degree in the bidding war for supplies, yet we were affected by that as greatly as if we had participated in it.

Dr. BERGMAN. Yes, that's correct. And I think the reason was that other countries, our allies principally, didn't have confidence in the commitment of one another to be mutually supportive.

Japan, for example, is 60 percent dependent on Persian Gulf oil. About 60 percent of Japan's energy supply is oil. And Japan was one of the panicky participants in this bidding sweepstakes in 1979.

The CHAIRMAN. Well, the psychology that affects the marketplace, particularly in the face of a perceived shortage, goes to prudent inventory building, and progresses beyond that to hoarding. And my prudent inventory building may be, in your perception, hoarding, and conversely. I don't know where you would draw the line between the two, but, certainly, during a period of perceived shortage, you also see a massive increase in perceived consumption or immediate apparent consumption which exacerbates the shortage.

Dr. BERGMAN. Well, I think you've put your finger on the justifications for using the slack period in the market to build reserve, to build inventories. And I think you point out the rationale for jumping in now while we're ahead to accelerate the accumulation of reserves.

The CHAIRMAN. Dr. Ebinger, you used some shortfall figures that I think I understand, but I want to make sure I understand.

On page 4 of your statement you mention the fact that in the second oil shock of 1979 the total removed from the world markets was only five-tenths of a million barrels per day.

I assume that that's net removal; that is, the loss of supply offset by increased production and other sources.

Dr. EBINGER. Yes. That figure is 500,000 barrels a day, Senator. And that was after the Iranian shortfall what was made up by the other producers, the Saudis, Nigerians, Venezuela and others.

The CHAIRMAN. Because the immediate loss was, of course, from those sources, from the Iranian source was larger than that?

Dr. EBINGER. Right.

The CHAIRMAN. The figures that I have would indicate that for 5 months, during the revolution in Iran, the initial loss—there was a 6-month loss at 3.7 million barrels from that source, and that was followed by the Iran-Iraq war, which resulted in a 15-month loss of production of 1.3 million barrels per day.

Dr. EBINGER. I think our research has shown that the actual period of shortage of the actual magnitude of Iranian production being removed from the market was far less than the immediate 5-month crisis; that, indeed, somewhere in the neighborhood of 60 to 90 days you have the Saudis coming on and some of the other producers. And what has always been of interest to us is the fact that small shortage, given what the other producers in the international arena did that it could have such a ratcheting upward effect on price.

The CHAIRMAN. That came because there was a perceived shortage?

Dr. EBINGER. I think it came because there was a perceived shortage, there was a perception that the radicalism of the Ayatollah Khomeini and Iranian revolution might spread elsewhere in the Persian Gulf, endangering other supplies. And it also came, of course, because one of the key companies, British Petroleum, which historically was a crude excess company and supplied a number of independents, exercised force majeure, thus, forcing the independents into the spot oil market to ensure their very survival. And this combination of factors ensured that the price would be run up.

The **Chairman**. Dr. Mendelowitz this morning made a statement which appears on page 3 of his statement, that there is now a world glut of oil, making an embargo less likely.

I was sorry for the interruption that made it impossible for me to ask the question at the time, but I wonder if you could comment with respect to that along the following lines: did he really mean an embargo is less likely, or an embargo would be less effective?

Dr. **Ebinger**. I think he meant, if I remember his testimony, I think it was an embargo, meaning a politically oriented embargo; I think somewhat analogous to what we had in 1974. I don't think he was arguing that there was not the prospects of a disruption occurring from other events that might not necessarily be the type of embargo we saw in 1973; such as, a closing of the straits or a damage of other facilities in the gulf.

The **Chairman**. Well, we've had other embargos in the past that didn't make any sense in terms of the overall market. In earlier years we have seen political events cause governments to take actions which some people call embargos. I don't know what the definition of an embargo is for our purposes. And, they have had different effects.

The Suez war in 1956-57 caused an embargo of supplies to part of the world. That removed at least for a portion of the time 2 million barrels a day, with very little consequence in terms of supplies or price.

The 6 day war in 1967, just 10 years later, invoked an embargo that affected 2 million barrels per day.

In 1970-71, there was no embargo, but other events caused a reduction in supply of 1.3 million barrels a day.

In 1973-74, the embargo reached 1.6 million barrels a day—and it was an embargo, yet it had massively more effects upon the world than did the earlier supply interruptions that were larger.

In 1978-79, although there was no embargo, it was the largest supply interruption we'd had, 3.7 million barrels a day, and it had a massive effect upon price.

And the 1980-81 loss was not an embargo, but it caused a 1.3 million barrel per day supply interruption, with real effects in the economy.

The point I'm trying to make is probably obvious, that it doesn't matter whether it's an embargo or not, it's a question of whether there is a supply interruption, and it doesn't matter whether there is a supply interruption unless that's related to the perception of adequacy of supply. Am I correct in that, Dr. Ebinger?

Dr. **Ebinger**. I believe you are correct, Senator.

I think the critical point here is that it does appear highly unlikely, for example, that the Arab countries would exercise control of the market to, say exercise an oil weapon as an Arab-Israli dispute. But, on the other hand, we could have a massive explosion in the Persian Gulf on the Iran-Iraq front which could lead—nothing in an embargo, but lead to a price hike.

I think the one thing we do want to remember is that in the earlier crises that you enumerated so well, clearly, up at least to the 1970-71 crisis, that the United States does have a surplus productive capacity, and was a major element in alleviating some of the shortfalls that occurred in Western Europe in those earlier crises.

The CHAIRMAN. With the IEA, we had an oil-sharing agreement.

Dr. EBINGER. That's right.

The CHAIRMAN. Arrangement.

Dr. EBINGER. That's right.

The CHAIRMAN. Dr. Bergman, any further comment with respect to embargos and supply interruptions?

Dr. BERGMAN. No. I think the point you emphasized, the perception of shortage is the key element here.

I think the psychology of it is critical. And, as Charlie pointed out, the actual shortage in 1979-80 was no more than 500 thousand barrels. Allowing that to double the price of oil within a year, which the International Energy Agency, by the way, tell us drained $1 trillion in economic growth out of the western systems. That is, to say the least bizarre, and that's why I think it's so important that a climate of confidence among the western allies be created.

The CHAIRMAN. I will yield in just a moment, Senator Evans.

International Energy Agency or international agreements have a large effect with respect to the perception, if not of the reality.

The second point of course, is that the building up of our SPR or our ability to deal with a supply interruption by some mechanism also have a great deal of effect upon perceptions, even greater perhaps than their reality.

Dr. Singer this morning had made the statement that anybody can buy oil at a spot price. The use of a supply, he said, to make supplies available in that case is a subsidy to the purchaser of the oil made available.

The difficulty I have with that statement is that yes, indeed, you could measure the difference in the price that was paid by the person who received the oil, as contrasted to what he might have paid on the spot market, and say that is a subsidy. But there's also a tremendous dampening impact upon the price of all oil that affects all consumers, that affects all of our economy, not just the purchaser of that oil.

I think that's a fair statement; is it not, Dr. Bergman?

Dr. BERGMAN. I believe so. I think Dr. Singer made an analytical statement, which is OK in the classroom, but, unfortunately, does not address the real world. And I think, again, you put your finger on why. Sure, a subsidy might be involved, but, nevertheless, the price increase ricochets through our economy and causes great distress.

The CHAIRMAN. And the the cost of that subsidy might be far less than the value to the economy?

Dr. BERGMAN. Precisely. And also there is sometimes a need to depart from some of our ideological preferences on how the economy best ought to be run, which involve, in most cases, a classic market economy. But I think that the cost of departing from that preference is required at times.

In energy we're still dealing with a national security issue, who's valuations cannot be reckoned by conventional marketplace economics.

The **Chairman**. One final question, then I will yield the floor to Senator Evans.

That question deals with how, if we build reserves and our allies do not, and they depend upon allocation mechanisms after a crisis, and do we then release the reserves to satisfy our policy in this country, how do we prevent them from benefiting from the investment that we made?

Mr. **Van Arsdall**. Is that addressed to me?

The **Chairman**. To anyone on the panel.

Certainly, their market suppression benefits us at that time, but our investment in dollars is over a longer period of time, and the United States bears the burden of the world's reserve supply.

Mr. **Van Arsdall**. I'd like to comment on that briefly. Our statement kind of directed to that, in that our participation in the IEA has a method to its madness—although I wouldn't want to characterize it as that—and that's that while we're communicating with these nations, we're communicating a policy of early drawndown of strategic reserves. We're stating that we don't want fictitious reserves, paper-games, among consuming nations, but real reserves. So you don't just have perception, but a reality. And that we're prepared, perhaps, to back that commitment up by stating that if the IEA crude sharing program is to be triggered, whoever asked for it to be triggered had better have taken responsible self-help measures before American oil goes in their direction.

The **Chairman**. Dr. Bergman, any other comments?

Dr. **Bergman**. Yes. I don't have the exact data, but I'd be willing to surmise that our IEA partners in proportion to their oil consumption probably have larger reserves than we do.

Some of them require private onsite reserves. I recall when I was in Switzerland in 1979 visiting a major factory that builds earthmoving equipment, and I was shown their oil reserves right in the factory. Each enterprise is required by law to have such a reserve.

The **Chairman**. Could I interrupt to make sure that I understand your answer, because if I understood you correctly, you related the reserve to the level of their consumption?

Dr. **Bergman**. Right.

The **Chairman**. Now, the IEA Agreement, as I understand it, relates the reserve requirement to the level of imports. Does that vary the statement that you would make?

Dr. **Bergman**. Well no, not really, because I think that in the case of all these countries, with the exception of the United Kingdom—as Fred said earlier, their import requirements are much higher than ours. Though I think the relation to consumption is a pretty fair measure, you could do it in relation to imports, too.

In either case I would estimate they're higher. And beyond their reserves we must acknowledge that the United States as the largest consumer of energy, of oil, bears the greatest burden in terms of accumulating and sharing.

The **Chairman**. Dr. Ebinger?

Dr. **Ebinger**. I think Mr. Stein wanted to add a point, if he may, Mr. Chairman.

The CHAIRMAN. All right.

Mr. STEIN. I would just like to say that the way the IEP Agreement is worked out, each state has to first, before any oil is shared—I think it's a point that's often missed—each state has to first reduce its demand, and there's a very complex formula based on permissible consumption and final consumption. Eventually, each state has either a supply right or a supply obligation. But what it boils down to is that each country affected,—and in the case of a selective embargo, if only one country, say, was hit with an embargo—before the entire IEA as a group would allocate supplies to that one particular country, they would first have to meet those demand restraint measures.

So it wouldn't really be a case of the United States giving its oil to Japan, say, or to New Zealand. It would be an example of the entire IEA allocating a portion of the net oil supplies available to that group.

The CHAIRMAN. Senator Evans?

Senator EVANS. I'm sorry that Dr. Singer has left. It would have been a much more interesting exchange if he had still been here.

But let me play the devil's advocate for a moment, as if he were, and ask maybe first Dr. Ebinger, why isn't he right? I mean, as I understand his statement, in essence that—and then you had said the same thing, that there is one world market for oil. So you seem to agree on that fundamental thesis. If there is one world market for oil—let me just reread one paragraph. He says, it stands to reason that if the sharing of oil among member nations takes place at the actual world price—talking about the value or lack of value of the IEA—the spot price existing during the emergency, then the IEA scheme is not needed. Anybody can buy oil at the high spot price. That's the significance of a spot price. But if the sharing is to be done at the much lower preemergency price, then the scheme becomes a clear subsidy to whoever receives the oil. It's a safe assumption it won't get done.

How is he wrong?

Dr. EBINGER. Well it does, indeed, become a clear subsidy, but I think, taking up Dr. Bergman's point that Dr. Singer's point is made well in the classroom but not in reality.

Just take, for example, the 1979 crisis. Almost everyone knows that there were three cases, Turkey, Sweden, and Ireland, where there was a great enough shortage to justify each of those countries triggering the IEA Agreement.

In the case of Turkey it was not a question of, if Turkey had been willing to pay a high price that it could have gotten the oil, the question was rather that Turkey could not afford to pay for the oil. And had there not been a political decision—which I would argue would only be made in the IEA context, and, of course, Turkey was very important to us also as a vital NATO ally—it simply would have been the case that Turkey would not have been able to get the oil because it was not able to afford the oil. And it was only by a complicated agreement worked out by Dr. Lonska, Executive Director of the IEA, to get oil into the Turkish market and get the system operating, that we did not set off a system where other consumers may have then wondered whether the IEA would have, indeed, taken care of other situations.

You can't argue with Dr. Singer's point in classical economic theory, that a commodity will always be bought if the price is allowed to allocate.

But what we were talking about there was a situation where, for unique reasons, at least three countries in the IEA membership could not afford oil and their economies would have been devastated in the absence. And it was only, in my belief, the IEA Agreement that ensured that that oil went to where it was necessary.

Senator EVANS. Well, it seems to me that they didn't have an oil shortage, they had a dollar shortage. And that's quite a different thing. If they had a dollar shortage, then there's lot of ways, foreign aid or other ways, if you want to handle that, if you feel that you want to subsidize that as another country, but that's a somewhat different concern.

Dr. EBINGER. Well, there was an oil shortage as well, Senator, because one of the problems is that in several of those cases these countries had traditionally bought on the spot market in the calm times. They did not have oil under long-term contract. Which mean, of course, that as everybody broke long-term contracts and you went to a system where all oil was flowing, it was simply a case that a lot of the independents that had served those markets had their oil supplies cut off by the British Petroleum and others that there was a lack of oil, as well as an inability in the case of Turkey—not in the case of Sweden or Ireland—to pay for that oil.

Mr. VAN ARSDALL. Senator, might I comment a little bit on that, because we've experience that fungible commodity situation during a shortage.

Senator EVANS. Yes.

Mr. VAN ARSDALL. We have found that when people who have the oil are facing a politically motivated shortage, an accident, or whatever you want to call it, of uncertain duration, their first response is to protect their own inventories and actually rebuild them, as has been mentioned earlier by the chairman. And that as people try to pry those barrels loose by bidding in the spot market, the price goes up and the cartel market price follows. And that end result stays with us for a long, long time.

And if somebody has lost a lot of their supplies and is bidding for a good portion of their supplies in that spot market, they're going to be more panicked, and they're going to bid a lot to try to pry those loose. And that's to everybody's disbenefit.

I don't regard it as a subsidy, I regard it as a return on an investment of the American taxpayers' money, which is to protect the U.S. economy and the economies of our allies.

Senator EVANS. It seemed to me that he was not arguing that you don't build reserves. He was suggesting that every country build adequate reserves. He was just suggesting you didn't need an artificial international agreement to get those reserves back into the market at modified price increases.

Mr. VAN ARSDALL. Well, I think that's why I mentioned it's not a fungible as you'd like. That's an economic model and not necessarily a behavioral model that's being reflected in that statement.

Dr. BERGMAN. I can't resist a stab at that question, at your devil's advocate question, Senator.

Senator EVANS. I'm not necessarily agreeing with that.

Dr. **Bergman**. Oh, I know. No, I know you aren't.

Senator **Evans**. It would be fun, Mr. Chairman, at some point if we had the opportunity for both to come back, to really more adequately express both viewpoints.

Dr. **Bergman**. But I just want to say this. It's the consequences of allowing the market to allocate the oil that would be very difficult.

We went through that in 1979, and the consequences of the sharp price hike richocheted through the economy and were a major factor in the economic tailspin from which we are emerging.

I think what the classical free market economists object to is any sort of Government intervention that would create a deterrent to that price hike.

And, by all means a Government decision to use the strategic petroleum reserve to moderate a price hike, or the possibility of a one would, indeed, be Government internvention. But, in my judgment, it would be better public policy in this case than going the classic marketplace approach.

Senator **Evans**. Well, any time you build reserves, presumably they're reserves that are either in private hands or in public hands. If they're in public hands, then you do have governmental decision as to when to release those reserves. It doesn't make any difference whether you release them through a complicated IEA Agreement or whether you just release them domestically, and in doing so, have the ripple effect of that go through the world market, which is a single market, and have the same effect without having complexity or having the difficulty of American people thinking that somehow the oil they've got in reserve is going somewhere else.

Dr. **Bergman**. I think you can do both. And I think an example of it was Secretary Hodel's announcement several weeks ago that the U.S. SPR would be available to moderate the price impact of a sudden interruption on the Persian Gulf. This action which would be a unilateral decision on the part of the United States, but would be perhaps an even better deterrent to a shortage and price hike than the complicated IEA sharing mechanism.

Dr. **Ebinger**. If I may just add there, Senator.

Senator **Evans**. Yes.

Dr. **Ebinger**. The one problem, of course, that's been argued by some oil companies of a public reserve like the SPR is the fact that you don't want to discourage certain companies from holding reserves privately, because what you will well do, if a company things, well, I don't have to go out and buy reserves to protect my interest because the Government has the SPR and will draw it down and bail us out because I'm in a key part of the country and the Government won't let that go under. How do you then reward the company that has exercised prudence and gone out and stockpiled property on its own to ensure its own interest, and why should they then be jeopardized in comparison to the people that acted less prudently?

So I think there is that problem in the whole question of stockpile policy.

Senator **Evans**. That almost argues for letting all the stockpiles be private and none governmental.

Mr. VAN ARSDALL. Intellectually I might agree, but the problem is that in the real world, nobody maintains emergency reserves until there's an emergency, and then everybody loses it to——

Senator EVANS. That's not what Dr. Bergman said that they do in Switzerland.

Mr. VAN ARSDALL. Well, in this country we seem to practice the grasshopper approach rather than the ant approach to energy preparedness.

Senator EVANS. Mr. Van Arsdall, in reading your testimony and in listening to you, of course, and this is not the first time I've heard from those representing farm communities suggesting that that is absolutely the No. 1 priority and that we ought to ensure 100 percent fuel set-asides for necessary agriculture. And yet, we're struggling here with trying to figure out how to keep the farm program below $20 billion a year because we've got so darn many surpluses.

Might it not be a good idea to maybe short-change the farm community a little bit and get rid of the surpluses?

Mr. VAN ARSDALL. Indeed, we testified that it might benefit the farmers who were able to get fuel for such an event to occur, because it would take care of our surplus. But I'm not certain that's the way to run food policy in this country.

And I might also add that our testimony today was not directed to maintaining an agricultural priority, but what we think are basic national objectives that would ultimately get you to that, and that's the strategic reserves and the international strategic reserves.

Senator EVANS. I've been struck by one thing about the very large price increases which occurred at least twice during the mid 1970's and end of the 1970's when those embargos or interruptions occurred, and the projections ahead, which are admittedly from some very sophisticated computer studies, about further price increases. I wonder to what degree do any of you feel the sharp price increases were as large as they were simply because oil, as a fuel, was abnormally low in price prior to that time; that we had an unnaturally low price for energy, and that the price increases were—the tripling of prices, the percentage increases came mostly because, for the first time, we were beginning to price energy at its value?

Dr. BERGMAN. Well, if I can pick up on that, Senator.

Two things happened. No. 1, the demand curve caught up with the supply curve insofar as oil was concerned.

And No. 2, very important thing that happened, was that the countries that produced oil assumed control of its pricing. They suddenly realized that they had a commodity that was more valuable than its existing price.

Senator EVANS. Sure, I understand that. Were they selling it too cheap, or are they now selling it to expensively?

Dr. BERGMAN. Obviously, your point is well taken. You're right. That by 1970 the price of oil was too cheap in terms of its value.

Senator EVANS. Dr. Ebinger, do you have a comment?

Dr. EBINGER. The other thing that I would just add there is I think the reason you saw the unusual run-up in 1979 was the fact that in December of 1979, commercial stocks had been drawn down to very, very low levels by historic standards, so when the events happened that led to the Shah's over-fall and the shortfall in Iranian production we, in a sense, had absolutely no cushion to draw upon. Thus, we had no choice but to rush out into the market where prices went through the roof because of the things we've talked about earlier today.

Senator EVANS. It seems to me that that kind of thing ought to be a temporary spike in prices, but it obviously wasn't. It became a new level of pricing which has lasted for a substantial time.

Mr. VAN ARSDALL. So much for the free market.

Senator EVANS. Well, that gets back to what I suggested. If, in fact, energy through oil had gotten to be abnormally expensive beyond its value, I don't think prices would have stayed up. People would have quit using it to a greater degree than they did, and they would have gone to other alternatives because they simply couldn't have afforded, in a free market, to use oil. But they continued to use it because it was still cheap, relatively cheap.

Mr. VAN ARSDALL. It would be nice to see resource economics dictate oil prices, instead of the last decade of disruption-driven prices with cartel backing up the increases.

The CHAIRMAN. Senator Evans, would you permit an interruption?

Senator EVANS. Sure.

The CHAIRMAN. I apologize for doing it, but this is a fascinating area that I've watched very carefully, and I'd like to sharpen the focus for just a moment.

Because of the 1973-74 embargo, the oil price went up dramatically. Yet, the world's economies seemed to absorb that shock without disruption—it had effects, but without disruption. We had gasoline lines and so on, but by 1978-79, things seemed to have accommodated to it.

The 1979-80 interuption that caused a further doubling of oil prices seemed to me to have a severe effect upon the World's economies, from which we have not yet fully recovered.

Is there—well, first of all, is that correct; and, second, does that suggest that the first price increases really were the repricing of a commodity that was below its market value? And the second price increase indicated pricing that had reached a point of being above its market value.

Senator EVANS. Before there's an answer. I'm not so sure I agree. That's very likely, you know, partially what's happened, but that first one in 1973-74, it wasn't until 1978-79, really, that our economy started to get back and we were back into a boom cycle and we had another one in 1980, and here it is 1984, and we're also beginning to get back into the recovery cycle. It may be that we're recovering just about as rapidly, as we look at it, as we did before. It may be slower. But I'm not so sure if we had a third one coming along that we would—you know, at some point we're going to test the value of energy.

The CHAIRMAN. I hope we don't find that out that way.

Senator EVANS. Well I hope we don't either. You know, it's like the electrical energy resource in the Pacific Northwest; we've had in many places in the Pacific Northwest during the course of the last 3 years a 700-percent increase in the price of electricity, but people are still using it, it just costs more. But it's still competitively cheaper than other alternative sources.

Dr. **Bergman**. It's still the cheapest in the country.

Senator **Evans**. That's right, it's still cheapest in the country.

Mr. **Stein**. But when we talk about the price of, the market value of any commodity, and especially one as crucial as oil, it's true that it is a unique commodity in world trade, and especially in its premium uses. But I wonder what exactly we mean when we say it's priced above or below it's market value, because when we talk about market value, I think we really have to look at the marginal replacement costs of (a) of that particular commodity, and (b) of whether an alternative substitute can then come on stream at the price that would substitute for that first commodity in all its implementation, in all its effects.

Senator **Evans**. Don't you get the alternative energy supply which we're certainly going to have to find at some point—year *x* we're going to be out of oil or so reduced in volume that we'll have to find an alternative source for the same purpose. Isn't an increasing price—or the higher the price of the current commodity the faster you'll look for alternatives. Isn't that correct?

Mr. **Stein**. That's right. And at some point we will reach, it seems to me, a point where oil will—where you will have a situation where you will have to start investing heavily in other sources because it will become uneconomic; again, in terms of its marginal replacement value.

Senator **Evans**. It gets back to the question then, is it in our benefit to artifically depress or keep down the price of that commodity and in doing so, just delay the alternatives and give ourselves a greater chance of real shortages at some future date?

Dr. **Ebinger**. It's not clear to me that if your question is indirectly referring to by our sharing in the IEA and by sharing——

Senator **Evans**. No, it wasn't at all.

Dr. **Ebinger**. But I mean by sharing, keeping the price down from what might happen in the free-for-all, everybody clammering for oil in the Middle East.

I'm sure that it follows that the price may be kept down, but I'm not sure that that is bad public policy in the sense that—because as Senator McClure said earlier, I believe, that the cost of not doing that may be far greater to the economy—to the macro-economy in the short run than the cost of that involvement and cooperation.

Dr. **Bergman**. I think, Senator, it's an issue of control. I would agree with what you're suggesting, that it is not desirable from a standpoint of public policy, and from a standpoint of a transition to a more balanced energy economy, which is where we are heading and should be heading at a faster rate, to artificially depress or control the price of oil.

I do think what's unhealthy though is leaving its pricing to others. And I think we have been clipped by that in the past decade. The other factor is the matter of timing.

Sharp price hikes in a very short timespan are very difficult, to assimilate.

Senator **Evans**. I agree with you that leaving the pricing to others is difficult. The fact that we are much more independent of

Persian Gulf sources today than we were 10 years ago—would anybody care to indicate the prime reason for that? Well, because the price went up and we found more efficient ways to use energy and, as a result, we're getting along with a much bigger economy today than we had 10 years ago without a very large increase in the amount of energy.

Mr. VAN ARSDALL. I think one should be careful in applying that as a long-term view as an energy policy.

Energy tends to be very cyclical, particularly because of playful disruptions. But demand is increasing now. The world economy, as earlier witnesses have stated, is still heavily dependent upon the Persian Gulf, which is quite volatilable. The incremental barrel, when inventories are tight and surge production capacity disappears or is not called into production, still can result in a tremendous increase in oil prices which, unlike wheat or other commodities, just don't come back down when you get the glut back.

If I may add just one point to that.

I think too, the fact that in a sense it was the alternative, at least in the United States, of consumers in some parts of the country switching to cheaper cost-fuels; namely, the availability of natural gas and/or coal which was, of course, not the case in other countries. The fact that a lot of easy conservation was able to be done, which increasingly will become more and more expensive, that will occur if the price of oil justifies it, but it won't necessarily be as easy or as cheap as the earlier conservation. And those are areas I think we need to think about, particularly once we have a decontrolled gas market, we may well have a situation where consumers may switch back to oil if gas prices go the way some analysts believe.

Senator EVANS. This has been most interesting, Mr. Chairman. I can't close, however, without making an observation.

I wonder if our predecessors meeting here in the mid-1800's, wringing their hand over the sharp increases in the price of whale oil, I wonder what they did at the time? I doubt very much if they put artificial price restraints on, they weren't at that level of sophistication, I guess. But it was the increase of—maybe they were smarter—but it was the rapid increase in the price of whale oil that led to the first discoveries of oil.

Mr. VAN ARSDALL. I hope nobody embargoed whales back in that time.

Senator EVANS. It was the shortage of whales that caused it.

The CHAIRMAN. On the other side, maybe if we had had a depressant on the price of whale oil, we wouldn't have had the decimation of the whale population, with the result that price controls might have served a valid social purpose as well. I don't know.

I do want to call attention to the fact that in the October hearings before this committee, I asked Secretary Vaughan to provide for the record some comparisons between the oil inventories in other participating countries in the IEA and the mechanisms by which they enforced those inventory levels. That information was supplied for the record, and for those who are interested they appear on page 143 through 145 of the hearing record of last October 19.

I think then that's not the definitive or final answer with respect to those mechanisms or the success of those mechanisms, because you can notice just the first three on the list, Australia, Austria, and Belgium.

Australia has no mandatory provision. Austria and Belgium do have mandatory provisions. Australia has 67 days of forward consumption; Austria 105; Belgium 66. And you can go on down the list and see some anomalies, but at the same time it bears on the other question that I asked of you, Dr. Bergman, a moment ago, whether we should measure the inventory levels, the reserve requirements by whatever name they are called on the basis of days of forward consumption or on the basis of net oil imports.

The IEA, as I recall, measures the mandatory provision is on the basis of net oil imports. And there you get a much wider variation than you do with respect to days of forward consumption.

That's a provision that Senator Metzenbaum must favor, because it favors the United States.

But we perhaps should look at that again to determine whether that is the appropriate way in which the IEA should operate.

I thank you for your participation, your patience with us in the schedule that we have had to keep today, and the interruptions in that schedule.

I thank all the members, particularly you, Senator Evans, for having been here at the beginning and staying until the end—and I didn't say the bitter end, but to the end of the process today.

There may be some questions that the members of the committee may wish to submit. I know of none at this time, but if there are, we will submit them to you for your response in writing.

Again, I wish to express my appreciation to each of you.

The committee will stand adjourned.

[Whereupon, at 1:15 p.m., the committee adjourned.]

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